a W. R. C. Smith publication

FIFTY CENTS

Textile Industries

Formerly "COTTON"

OCTOBER, 1957

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Cross-Jet Cleaner

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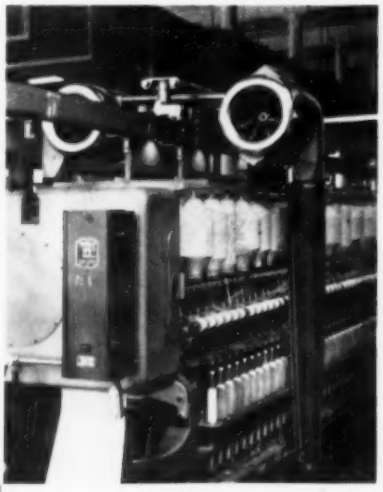

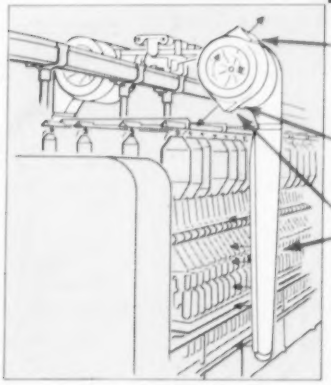

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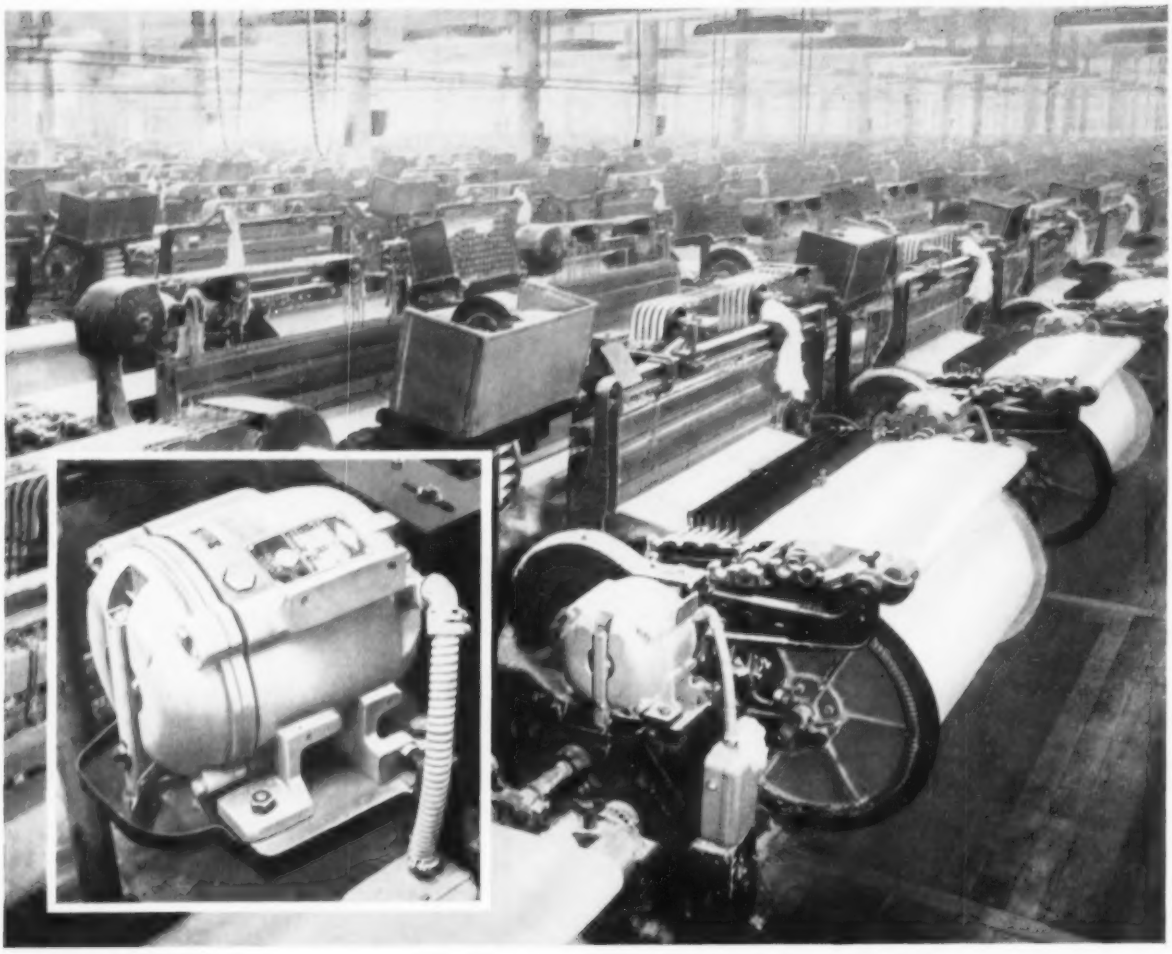

AT CONE MILLS

DIEHL transmitters improve product quality

Three hundred Draper looms powered by the latest type DIEHL Power Transmitters were recently installed as part of an important new modernization program at Cone Mills Corporation's Minneola Plant, Gibsonville, N. C., with most satisfactory results in the improvement of loom performance and product quality.

DIEHL Power Transmitters were developed especially for Draper looms, and feature a fast, positive clutch-brake mechanism combined with an inverted type motor which provides high inertia without need for a separate flywheel. This design produces a constant steady pull for more efficient weaving and better quality greige goods, in the opinion of a plant official. "Increased efficiency of looms will be joined by lower operating costs because of the combination of Draper X2 looms and DIEHL Transmitters," he said. The looms now run at 186 picks per minute.

Cone Mills plant officials are favorably impressed with the positive action of the clutch-brake mechanism, the pinion driving shaft construction which eliminates the thrust bearing on the loom, the speed and ease of removal and replacement of the transmitter for inspection and servicing, the totally enclosed housing design which protects against weave room lint and fly, and the negligible maintenance and down-time costs.

DIEHL Power Transmitters can increase production and efficiency—at lower operating costs and less down-time—in your mill. Specify them for your looms.

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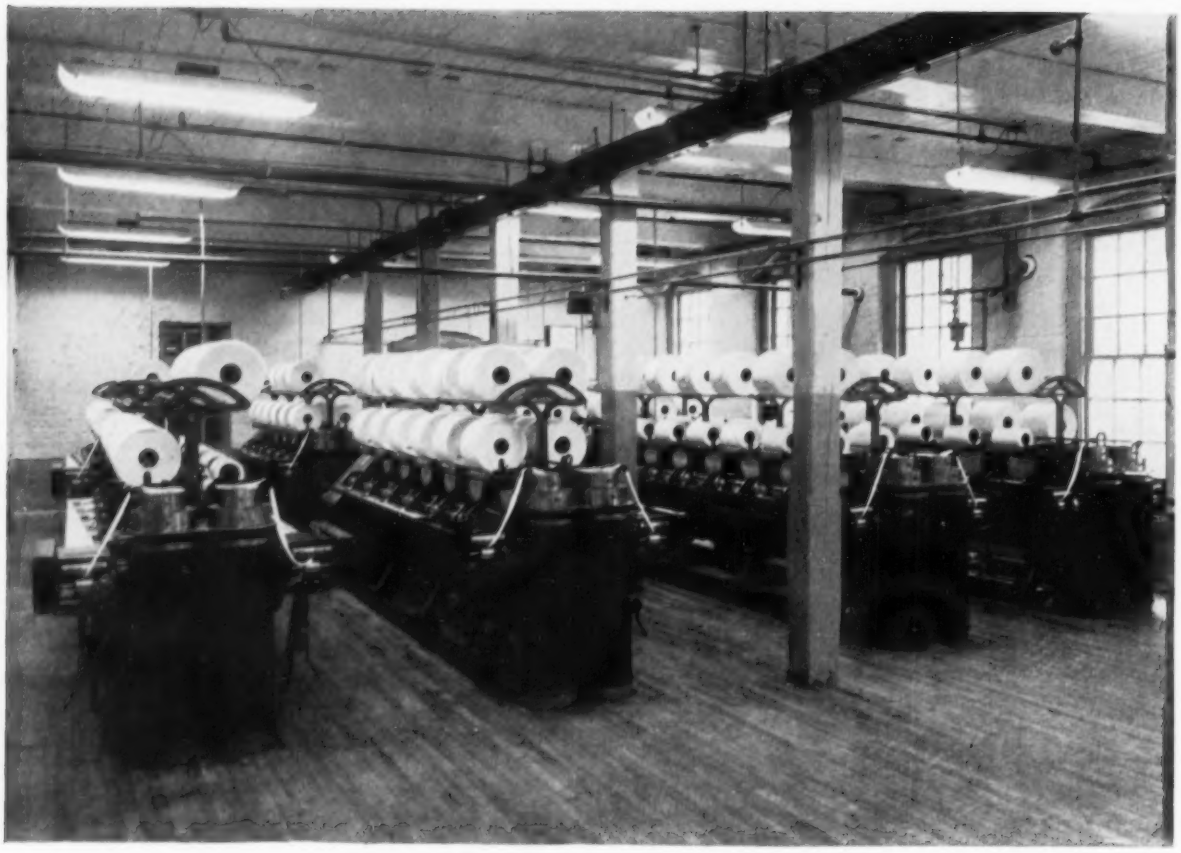

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TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

NBP BPA

Textile Industries

Formerly "COTTON"

Vol. 121, No. 10
October, 1957

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TIME SAVER for busy readers

Here is a summary of the major articles in this issue

Use it to organize your reading time most effectively

Why Sizing Costs Went Down at Clinchfield 93

■ Clinchfield Manufacturing Co., Marion, N. C., makes 80-squares, using 30s warp and 40s filling. The mill recently brought its two slasher rooms up to date. One room was equipped with Air-Dri slashers and mobile creels. Two older slashers in the other room were rebuilt, including new cooking and size storage equipment, new size boxes, multimotor drives, Moist-o-Graph, new large-beam friction drive on front, new piping, installment of antifriction bearings, and replacement of all worn parts.

One of TI's editors visited the plant; his report shows how Clinchfield has cut slasher costs and improved weaving efficiency through its modernization program.

How Kendall Builds Managers 97

■ Every textile mill executive will sooner or later retire, resign, or die. Some mills don't face the problem of vacancies in management until the inevitable has happened, often unexpectedly soon; then it may be necessary to promote someone who hadn't previously been given serious consideration for promotion, or to "borrow" from some other mill's staff.

Other mills keep a "perpetual inventory" of candidates for advancement up the managerial ladder—each is rated regularly as to his readiness for promotion to the next step on the ladder, and each takes part in a program designed to develop his management capabilities.

The Kendall Co. is an outstanding example of a textile firm which takes the latter approach. In this article, S. D. Chamberlain, Kendall's Director of Management Development, tells how the company got its program under way, what goals it tries to achieve, and how it goes about achieving them.

H_2O_2 for Oxidizing Vats 104

■ Many dyehouses are using hydrogen peroxide to oxidize vat dyes on cottons and synthetics, because it improves the shade, is easily removed, is convenient, equipment is easy to keep clean, and the goods are left in good condition for finishing.

This article describes the procedures for oxidizing vats on continuous ranges, jigs, and package machines; and the equipment used. Case history reports are given of the use of H_2O_2 at American Finishing Co., Memphis, Tenn., and at Ahern Textile Print, Inc., Norwich, Conn.

Keep Quality Up 109

■ Avondale Mills' Sycamore, Ala., plant has an incentive plan in operation for arousing a competitive spirit among section men, foremen, assistant foremen, inspectors, and packers. The operation of the plan in the card room was described in TEXTILE INDUSTRIES for September, 1956. This article begins with the drawing process, and describes the responsibilities of everyone concerned with the yarn processes, through shipping.

A TI editor visited the Sycamore plant recently; he describes Avondale's system of "unit responsibility" for section men, how the quality control department fits into the incentive plan, and lists the infractions of good mill practice which earn demerits for those responsible. Foremen and assistant foremen are "gigged" for defects originating within their departments. High emphasis is placed on correcting customer complaints—these rate the most demerits.

Weave Cotton Goods 200% Faster? 115

■ This is the first article to appear in print on a new British shuttleless loom, which is reported to weave double cloth at 380 picks per minute in a 64-inch reed space. Known as the "Tumack," the loom is built by James Mackie & Son Ltd., Belfast, Northern Ireland.

The picking mechanism of the Tumack loom is unique; filling is inserted by two spears which each insert two filling threads at a time in separate sheds, one above the other.

Harnesses are divided into several sections, so that shedding takes place in a "rippling" motion across the loom, between the two spears. The selvage is formed by a short end of each pick, which is woven in after being cut by a special pin-cutter mechanism.

A mill in Belfast now has 24 of the new looms running, tended by one weaver, and 72 are operating in a mill in Scotland. Eighty of the looms are being erected in a German mill.

TI's exclusive report was written by a European textile man.

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Photo courtesy Burlington Decorative Fabrics, Burlington Industries, Inc.

New way to back a winner

Textile manufacturers have looked long and hard for a means of improving the performance of fabrics for upholstery, drapes, handbags and footwear. Many types of backing were tried, but most of these presented new problems—in reduced flexibility and resilience, high cost, objectionable odor, poor adhesion or lack of permanence.

Finally, one industry leader tried a coating based on PLIOLITE LATEX. Barely visible, this lightweight, odorless backing "muscles" fabrics in every direction. It helps them retain their shape, even after severe stretching—and reduces wrinkling. It also improves body and drape, with increased resistance to raveling, tearing or snagging. *And it's permanent!*

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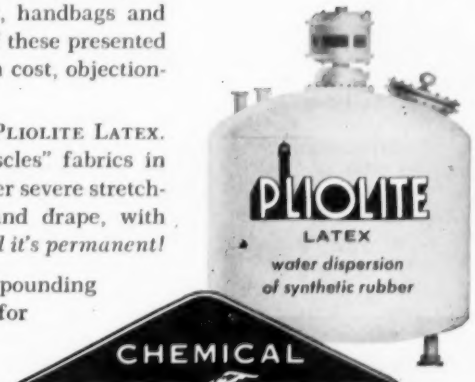

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Colorful, new bulletin, "From Fibre to Fabric," shows the practical benefits that Bijur Automatic Lubrication offers to the Textile Industry. Write for your copy.

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Shorts and Remnants

By J. C. C.

► So here we are—October again—and before you know it, it will be Hallowe'en, Thanksgiving, Christmas, New Years, and 1958.

► So let us be the first to wish you a Merry Christmas and a Happy New Year. So it's only 75 more shopping days till Christmas; and when you are shopping, make it for clothes, towels, bath sets, and textiles of all sorts. Wait a minute! Hold the horses! Let the men buy their own neckties.

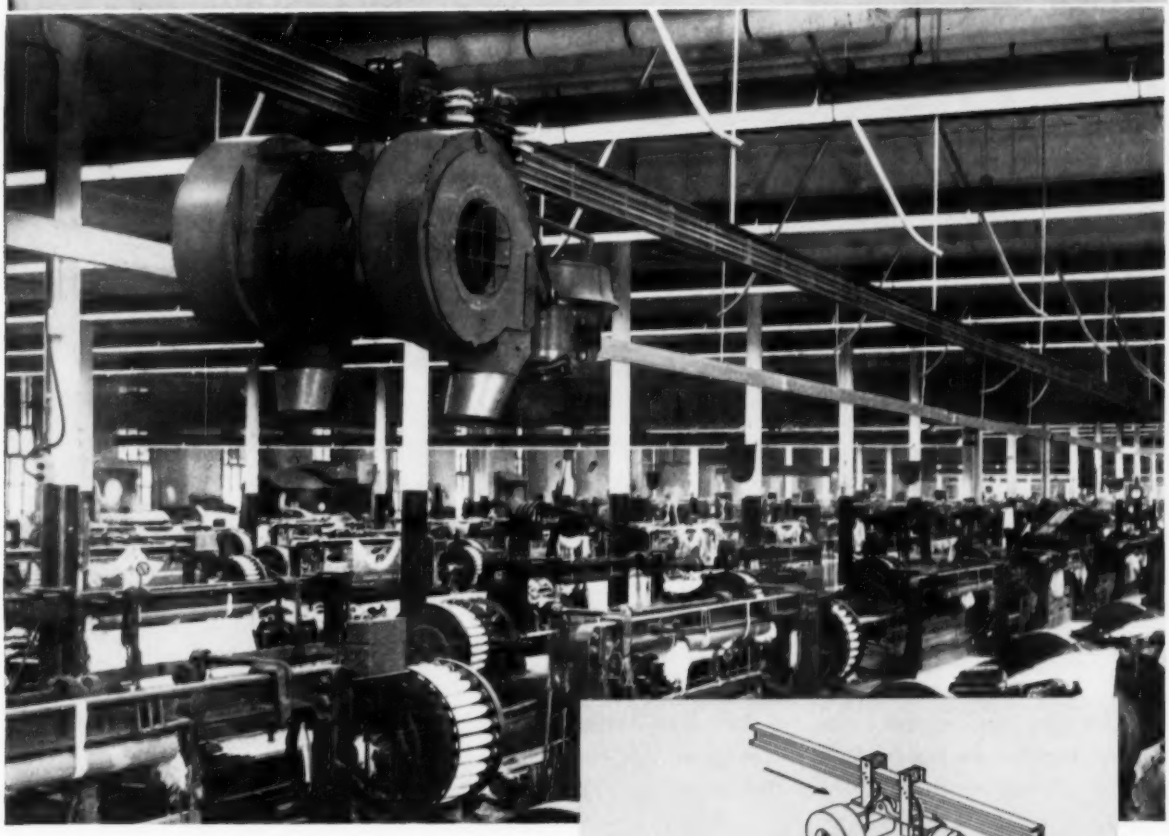
► So it's also only 365 more days until the 20th Southern Textile Exposition at Textile Hall, Greenville, S. C., October 6-10, 1958. According to **Miss Bertha Green,** Sec., applications have already been received for more exhibit space than is available, but provision of more space is planned to accommodate as many exhibitors as possible and to make the show "bigger and better" than ever.

► There are probably a lot of famous October dates in history, and we'll save them for next year or sometime later. We would, however, like to mention early October 1862 when Van Dorn brought up his Confederate forces to engage the Yankees under Wm. Rosecrans near Corinth, Miss., in one of the hottest minor engagements of the Civil War. Van Dorn, Rosecrans, and the battle at Battery Robinet might well be long forgotten except for the remarks of a wounded Confederate officer who proudly declared to his Yankee captors "You licked us good today, but we gave you the best we had in the ranch." So if you always give the best you have in the ranch, you can be proud of it.

► Just as TI is proud of its contents (both editorial and advertising), it is also proud of its readers and advertisers. Readers who don't see what they want should ask us for it. We hope you will find everything you need in our Mid-November ANNUAL PRODUCT PARADE & BUYER'S GUIDE coming up, as we are trying to make this the best buying reference available for textile manage-

Amco Introduces its New

Heliclone Loom Cleaner



Provides automatic, continuous cleaning of looms and ceiling • Drastically cuts cleaning costs • Steps up production • Improves quality of fabric • Reduces fire hazard • Improves weave room appearance • Boosts employee morale • Can be incorporated with beam handling equipment.

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ment and operating executives. Look for it.

► And **Abe Liebster** of M & M Knitting Mills, Phila., has something to be proud of here with the winner of the National College Queen Contest, as

selected at a dinner of the National Knitted Outerwear Assn. We volunteer for judge next year.

From 1951

"Would it be possible to obtain a copy of 'Physical Textile Testing' by Mary Jo Wesson, which was copyrighted 1951. . . . "

JOHN E. DAVIS
Bristol Worsted
Bristol, R. I.

► "Physical Textile Testing" was "oversubscribed." It is now out of print. Does some good reader have a copy he can spare to Mr. Davis?

Automation for Knit Underwear

" . . . Please inform me whether you know of any start having been made in this direction [automation] and by whom. The inquiry reaches me from a mill, whose offices are automated up to snuff; but their factory, producing knit underwear, is still being run along similar lines as a generation ago, faute de mieux."

R. SIEBENMANN
Brooklyn, N. Y.

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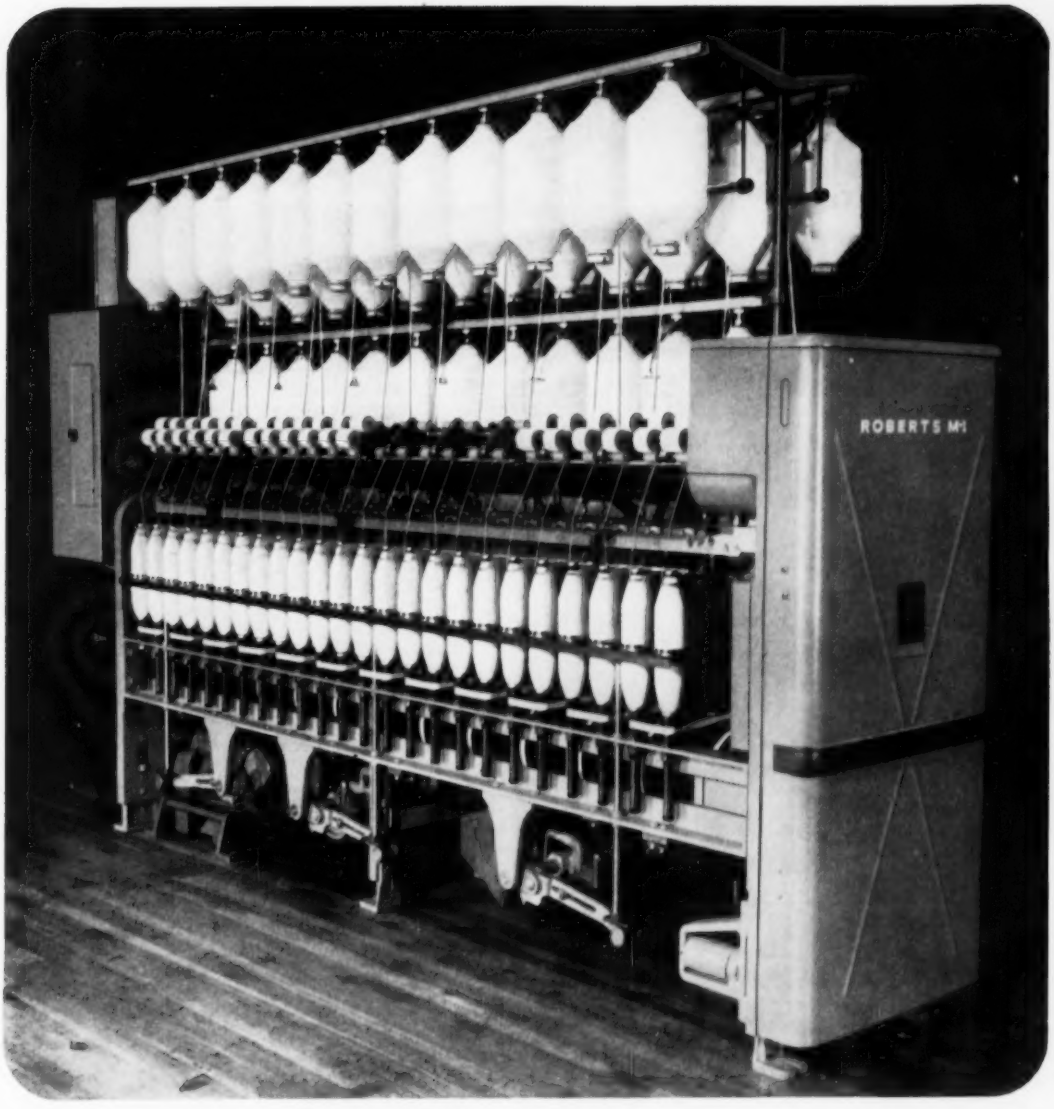

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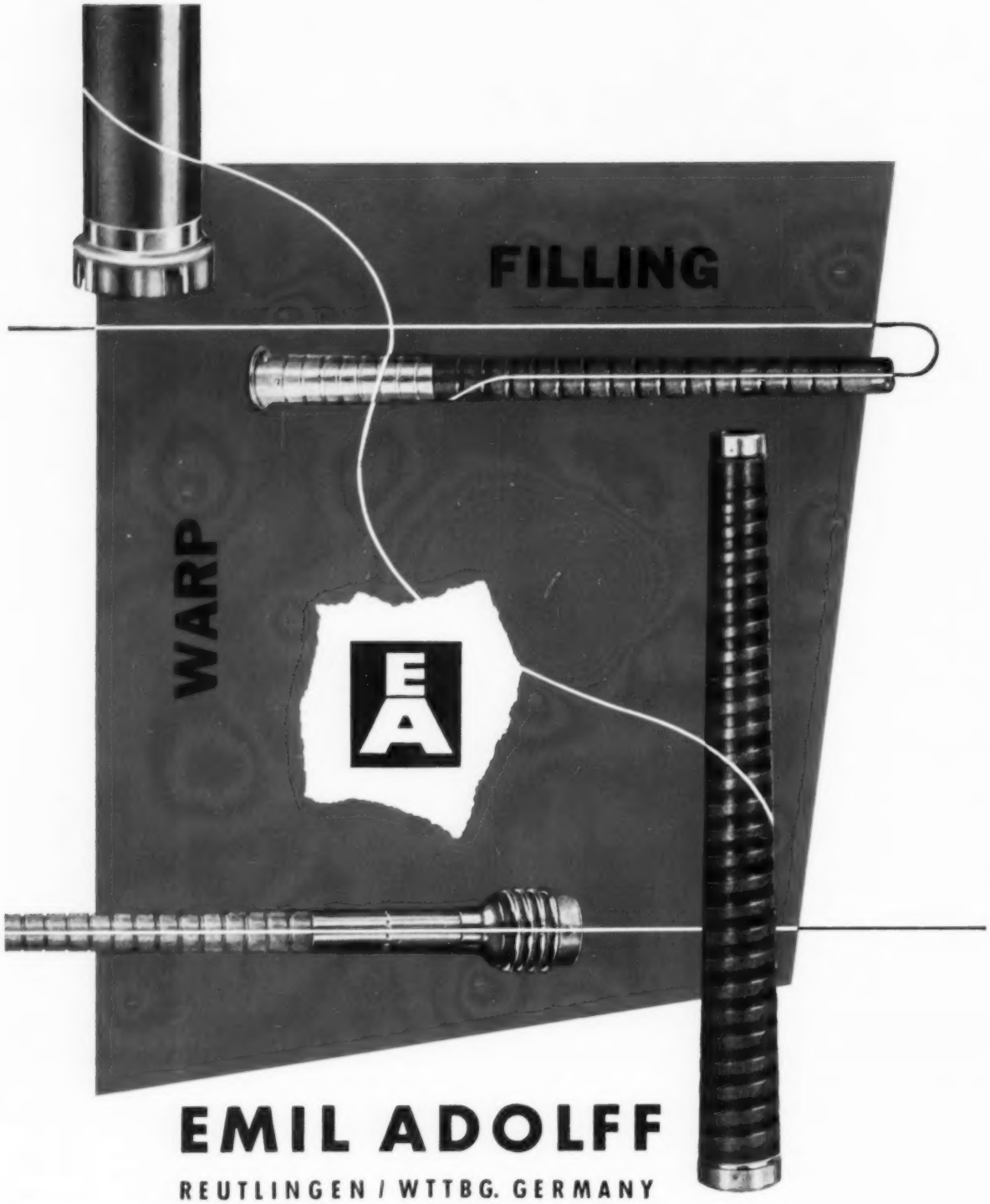
PROVEN IN PERFORMANCE

New Roberts Spinning has been running in the mill since February 1956 and has proven itself not only most economical in initial cost but low in maintenance. One large user with more than 150 frames in continuous production reports that the new Roberts Spinning runs with higher front roll speeds, better yarn quality and substantially lower ends down than the several thousand frames of other makes in operation in their mills.

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

For further information use Handy Return Card, Page 197



EMIL ADOLFF

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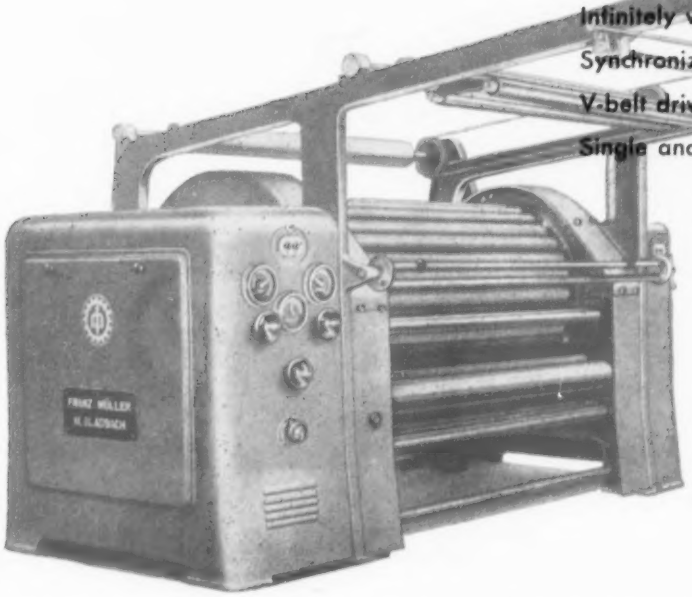

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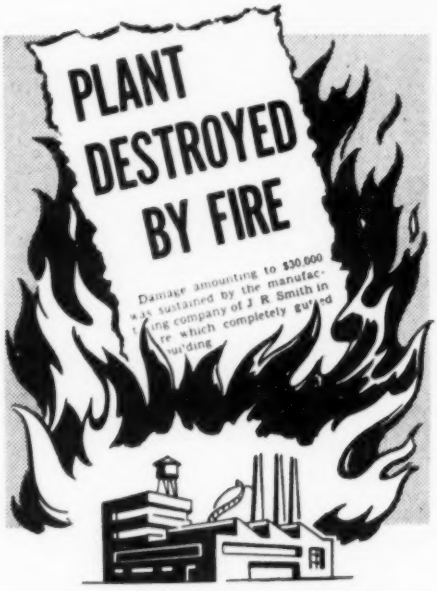
Representatives in principal foreign countries

RHONITE *and* RHOPLEX *are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.*



. . . too late! don't wait!

Change now to an absolutely safe cleaning solvent

IMMUNOL (Reg. U.S. Pat. Off.)

Proven by 11 Years of Continuous Use in Leading Mills—Everywhere

IMMUNOL cleans effectively and quickly. 1 part IMMUNOL to 20 parts your water will clean better than flammable solvents. Remove oil, grease, soil, size, etc., quicker, easier in absolute safety with IMMUNOL.

NON-FLAMMABLE . . . Immunol cleans without any danger whatsoever of fire. Even when contacted by an open flame Immunol is perfectly safe. Use Immunol with safety anywhere in your plant under any condition.

NON-TOXIC . . . being odorless and positively harmless, Immunol is easy to work with for extended periods of time without any effect whatsoever to the personnel.

SAFE TO STORE . . . Immunol is completely safe in any form. It presents no hazards common to flammable cleaning solvents. Furthermore, Immunol requires considerably less storage space.

SAFE TO SKIN . . . Immunol is so safe that workers can contact its solutions all day without discomfort or harmful effect. Costly protective clothing and accessories are eliminated as a result.

INHIBITS RUST . . . Immunol provides protection against rust to most ferrous metal parts of machinery. It leaves a protective, rustproof coating so minute it cannot be seen or felt.

IS PRACTICAL FOR USE IN THESE OPERATIONS

Bleaching	Cleaning	Full Fashion	Picking	Spooling
Blending	Combing	Inspection	Printing	Throwing
Boarding	Dyeing	Knitting	Roving	Tricot
Carding	Drawing	Maintenance	Rust Proofing	Tufting
Circular	Equipment	Opening	Slashing	Twisting
Knitting	Finishing	Packaging	Spinning	Warping
		Weaving	Winding	

* **Another revolutionary product discovery . . . . MAKES FIBRE BEHAVE!**

Fibregard
Reg. U.S. Pat. Off.
ORIGINAL COLLOIDAL LUBRICANT

TO MAKE SYNTHETICS . . . ALONE . . . OR WITH NATURAL FIBRES . . . CARD AND SPIN BETTER
Apply a FIBREGARD emulsion at the blender or picker. This stock lubricant will
BIND THE FIBRE PERFECTLY . . . WITHOUT STICKING OR TACKINESS . . . CARDS WILL NOT GUM. ALL NEPS AND BALLING ELIMINATED. IS ANTI-STATIC . . . TINT EMULSION . . . WITHOUT DANGER OF CRITICAL POINT OVERLOADING. OUTSTANDING FOR SPUN YARNS . . . TUFTED CARPET YARNS . . . ETC. USED FOR YEARS BY LEADING MILLS

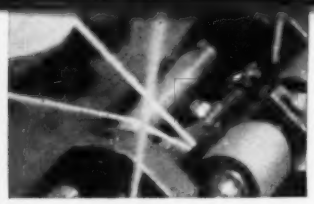
ASK FOR FREE TESTING LOT

Test IMMUNOL at our expense. Write for a free sample today.

HARRY MILLER CORP. HAMICO 4th & BRISTOL STREETS PHILADELPHIA 40, PA

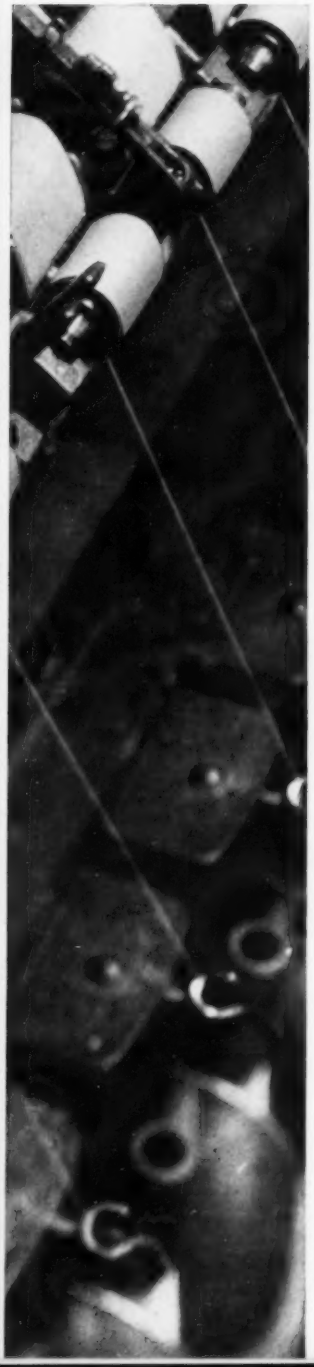
Manufacturers of
- GLYCOLA
- ACTIVOL
- POTENTOL
- FIBREGARD
- REVERSOL
- FIRMTAL

HARRY MILLER CORP.
Original Products and Processes Since 1936
4th and BRISTOL STS., PHILA. 40, PA.
DAvenport 4-4000
Service Representatives in Principal Cities



Why new Dayco AP 664 Aprons improve yarn uniformity

. . . give trouble-free drafting



Smoother operation is the reason new Dayco AP 664 Aprons draft more uniform yarn, either natural or synthetic. Newly developed, highly flexible compounds eliminate drag around the nose bar, even on the latest super-draft systems.

Semi-gloss pink inner surface gives far lower coefficient of friction. This reduces chatter — indication of jerky, uneven motion around the nose bar. Non-stretch, pliable cord body assures maintenance of uniform apron tension for surer drafting control.

All through the long life of the new Dayco Apron, the compounds in the light blue drafting surface maintain just the right coefficient of friction for improved fiber alignment. Special ingredients prevent lint from coating the surface, therefore the drafting surface always remains the same.

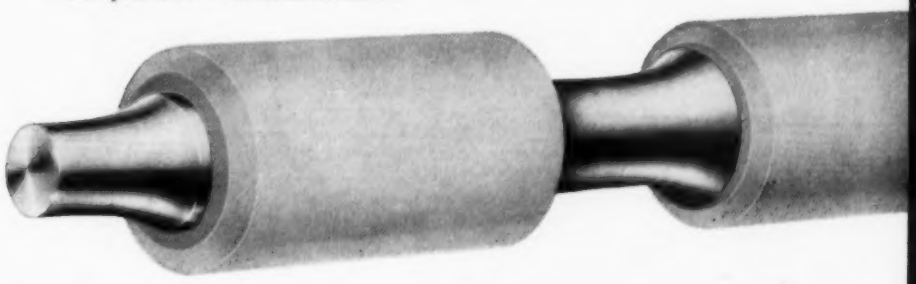
Compounded of materials which stubbornly resist chemicals or oils, Daycos instantly resume quality drafting after shutdowns. They are not affected by heat or humidity, nor will they take a permanent set. Flipped and broken aprons are a thing of the past. Dayco Aprons are available for both single and double apron systems.

Your Dayco Representative will be in soon to give you full information on how new Dayco AP 664 Aprons will improve the quality of every yarn. Or write The Dayton Rubber Company, Textile Division, 401 S. C. National Bank Bldg., Greenville, S. C.

For even greater drafting control—

New Lap-resistant Dayco EW 661 Cots offer these advantages:

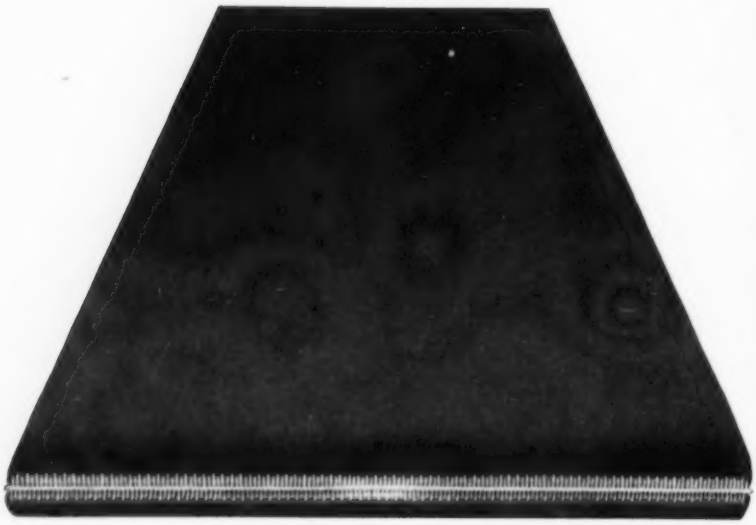
- Stay dry and solid despite heat and humidity
- Dissipate static • Resist all known oils



© D.R. 1957

Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving



MAINTENANCE SAVINGS COME YOUR WAY with Clipper

HOOKS and LACERS

Even on small-diameter rollers like the one shown above, Clipper machine-laced joints are smooth and flexible and give longer life. Hooks are firmly imbedded flush with the belt surfaces and clinched by up to 45,000 pounds of pressure. Double-staggered gripping and perfectly rounded loops distribute strain evenly. Wear on hooks, belts and machinery is minimized by smoothness of the Clipper machine-laced joint. There is no pounding to cause excessive wear. Save maintenance time and expense and cut unproductive downtime by using Clipper hooks and lacers.

FOR MORE INFORMATION

Detailed product information and case history examples of Clipper machine-lacing benefits are contained in Bulletin No. 157. Send for your free copy today.

Ask your Industrial Distributor for Clipper Products

Clipper BELT LACER COMPANY

980 Front Ave., N. W. Grand Rapids 2, Michigan

Shorts and Remnants

(Continued from page 8)

From 1953

" . . . As consultants in this field, we are very much interested in such training ["Training Seamer Operators," Apr. '53]. Therefore, we will appreciate it very much if you will send us one or two copies of this article."

MILLER A. GOWEN
Dir. S. J. Capelin Associates, Inc.
Milano, Italy

► To friend and former Atlantan Miller Gowen, now in Italy, two copies of this article were gladly sent.

Inquiries

"Thank you very much for your cooperation in referring the inquiries to us [on microscope projection unit and crease-recovery testers] . . . "

D. L. BENNETT
Shirley Developments Ltd.
Manchester, Eng.

Helpful

" . . . It would, therefore, be appreciated if you would send me this issue [Aug.] as I miss the various helpful articles contained therein."

HENRY TRUEMAN
United Yarn Corp.
Chicago, Ill.

Keeps Back Issues

"As long time subscribers to your TEXTILE INDUSTRIES magazine, we find many issues of vital interest to us, and we do not discard back issues for this reason. . . . "

ROBERT W. SCHNECK
Gen. Mgr. Marianne Mills, Inc.
Lansdale, Pa.

Likes Slub Catchers

" . . . We believe that the adoption and use of the equipment described ["Vacuum Slub Catchers," Aug. '57] by the Textile Industry will not only benefit the principals by increasing the production and lowering the costs but the workers by improving the working conditions."

SAM R. PLANER
Piedmont Mills, Inc.
Gastonia, N. C.

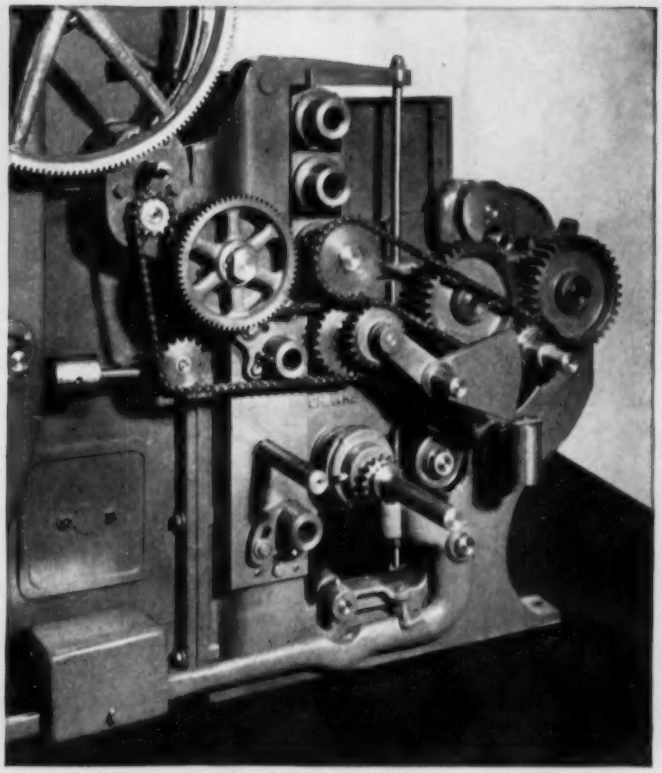
20% Profit for Mills in Turkey

"I am thirty years old and have a Bachelor of Science degree in Mechanical Engineering; I am the manager of a small textile factory in Turkey. Now I am studying textiles

(Continued on page 20)

Need New Pickers?

. . . then, think of what you get in ALDRICH PICKERS!



• The chain drive to the draw-rolls and screens permits better draft control between the screens and the draw-rolls and the draw-rolls and the calender rolls. The old gearing was rather inflexible. The new chain drive is very flexible, and can give much smaller increments of change than were possible with the old drive.

The chain drive to the fluted calender rolls is also highly flexible and permits very accurate maintenance of the desired draft between the vertical rolls and the fluted rolls so that any slack can be kept out of the lap, and firmer more compact laps wound on the lap pin.

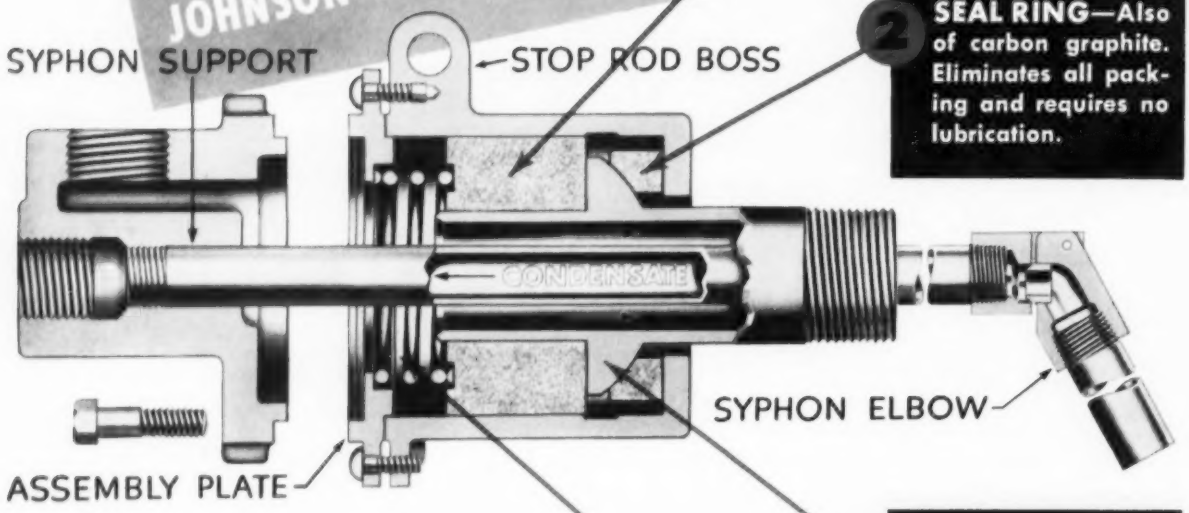
This chain drive to the fluted rolls stops those rolls while the picker is being doffed. This prevents injury to the lap by unnecessarily turning it while no cotton is being added. The lap is broken on top of the back fluted calender roll, and remains threaded up under the press roll. This eliminates the heavy place in the lap usually found next to the pin, and it also speeds up the doffing time, because the lap is only two inches from the pin when the picker is started.

AldricH MachinE WorkS

Greenwood, South Carolina

Only 4 INTERNAL PARTS!

TYPE SB2-P JOHNSON JOINT and JOHNSON SYPHON ELBOW



1 GUIDE—Makes the joint self-supporting. It is of self-lubricating, long-wearing carbon-graphite.

2 SEAL RING—Also of carbon graphite. Eliminates all packing and requires no lubrication.

3 NIPPLE—Rotates with the roll, and seals against the ring.

4 SPRING—Serves for initial seating only. In operation joint is pressure sealed.

Notice how straightforward and simple is the design of this Johnson Joint. This unmatched simplicity means fewer breeding places for trouble... simplifies overhaul and repair out in the field. At the same time the joint is completely packless, self-adjusting, self-lubricating and self-supporting.

In this Series 3000 Type SB2-P the assembly plate holds the internal parts in position when head is removed. This makes it a perfect teammate for the Johnson Syphon Elbow which can be inserted or withdrawn right through the joint.

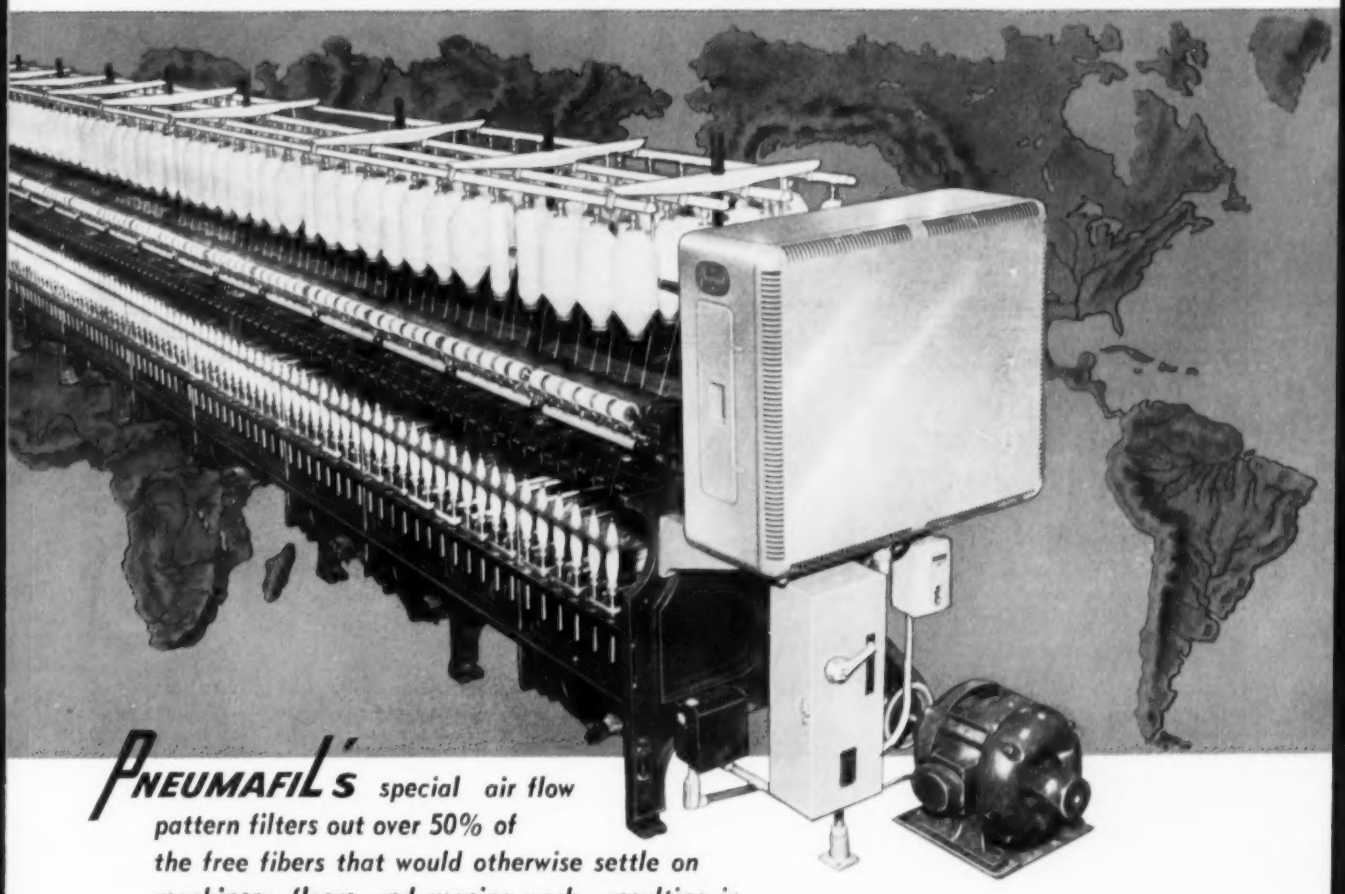
Test it yourself—We'll gladly supply a pair of the units shown for 90 day trial right in your own mill; no obligation of course. Write for details and literature.

Products of The Johnson Corporation

815 WOOD ST., THREE RIVERS, MICH.

Rotary Pressure Joints • Compressed Air Separators and Aftercoolers
Direct Operated Solenoid Valves • "Instant" Steam Water Heaters

22,000,000 PNEUMAFIL® EQUIPPED SPINDLES ARE *NOW* PRODUCING TOP QUALITY YARN THROUGHOUT THE WORLD!



***PNEUMAFIL's** special air flow pattern filters out over 50% of the free fibers that would otherwise settle on machinery, floors, and running work—resulting in . . .*

MORE YARN—Higher than ever front roll speeds are possible with Pneumafil equipped frames, because end breakage is drastically reduced. Frame efficiency is substantially increased to give you more yarn production than ever before.

BETTER YARN—A "Pneumafil cleaned" spinning room produces top quality yarn because Pneumafil catches and filters lint out of the drafting area before it becomes slubs, assuring better yarn quality than ever before.

LOWER SPINNING COSTS—Larger spinning assignments are made possible with Pneumafil equipped frames because spinner hands have less ends to piece up, and hand cleaning is tremendously decreased.

When you buy Pneumafil products, you can be sure of getting top value for your money!

PNEUMAFIL UNIT SYSTEM • CENTRAL AIR HANDLING SYSTEM • CENTRAL MATERIAL RECOVERY SYSTEM
PNEUMAKOOL • LINT FREE CREEL • PNEUMASTOP • PNEUMACARD • PNEUMACLEAR
AIR CONDITIONING

For more information write to:

PNEUMAFIL CORPORATION
Atlanta, Ga.

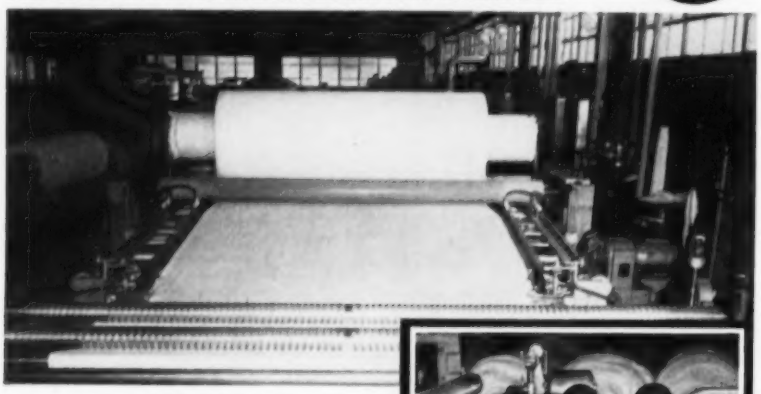
PNEUMAFIL®

CHARLOTTE 8, N. C.
Needham Heights, Mass.

© Pneumafil Corporation 1957

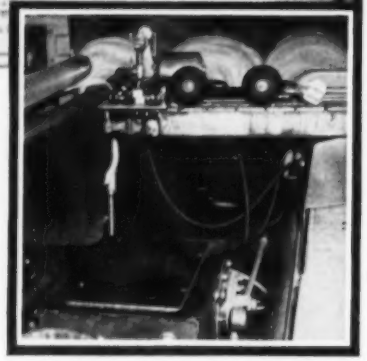
Askania Regulator Company NEWS

AUTOMATIC CLOTH GUIDES FOR TENTER FRAMES, TENTER BATCHERS, LABEL MARKERS, TUBERS AND EXAMINERS



ASKANIA CLOTH GUIDE ASSURES UNIFORM DYEING

Applied to
McCreary-Burlington Tenter Batcher
at Milco Undergarment



Accurate control of batcher roll winding is essential to uniform dyeing

Askania Cloth Guide Controls, installed on *McCreary-Burlington* Tenter Batchers lay the cloth on the pins with consistent accuracy at the Milco Undergarment Co. plant in Bloomsburg, Pa. The guide accurately positions the entrance rails so that at the exit end any fabric, in any width, is wound at uniform, controlled tension into a compact, uniformly-wound roll, permitting the highest accuracy in the dyeing process.

ACCURACY • SPEED • VERSATILITY • ECONOMY • SIMPLE INSTALLATION and MAINTENANCE

ASKANIA Cloth Guide Controls can be installed on new or existing equipment. It automatically handles any cloth including flimsy lace, delicate silks, coarse mesh cloth, synthetics, *without contact with the cloth.*

NEW ASKANIA REGULATOR APPLICATION BULLETIN

Bulletin No. 22.1 provides the full information, including application diagrams and illustrations you need to determine cloth guide control potentials in your own plant.

For instance, you'll find the answers to these questions.

1. How ASKANIA Cloth Guides assure clipping, pinning closer to the selvage.
2. How the Cloth Guide can be quickly and easily installed on new or existing machines by any competent mill mechanic.
3. Why the Cloth Guide reacts to the flimsiest material with instant speed and powerful force.
4. How you can improve quality and efficiency in many finishing mill operations.

WRITE FOR YOUR COPY TODAY TO ASKANIA REGULATOR COMPANY, 260 E Ontario Street, Chicago 11, Illinois.

ASKANIA REGULATOR COMPANY
"CONTROLS FOR INDUSTRY"
HYDRAULIC, ELECTRONIC CONTROLS & SERVOS, GENERAL SYSTEMS, ENGINEERING & COMPUTER SERVICE, VALVE ACTUATORS & CYLINDERS

A SUBSIDIARY OF GPE

Shorts and Remnants

(Continued from page 16)

in North Carolina State College, and I will graduate in January 1958.

"A large textile mill in Turkey is receiving at least 20 per cent profit today. I am trying to build a large textile factory in my country. My company has enough capital to cover all operation and building expenses, and also to buy machinery. But today, my government is having a huge industrial revolution; for this reason we are not permitted to purchase foreign machinery. Yet the government permits a foreign company to merge with our company and build any size textile factory.

I am interested in such a merger with an American company. I am not interested in bringing money capital into my country. I am only interested in machinery.

"[are there] companies in the United States which might be interested in a merger with my company and thus supply textile machinery to my company?"

IBRAHIM YUCEYAR
P. O. Box 5701
College Station
Raleigh, N. C.

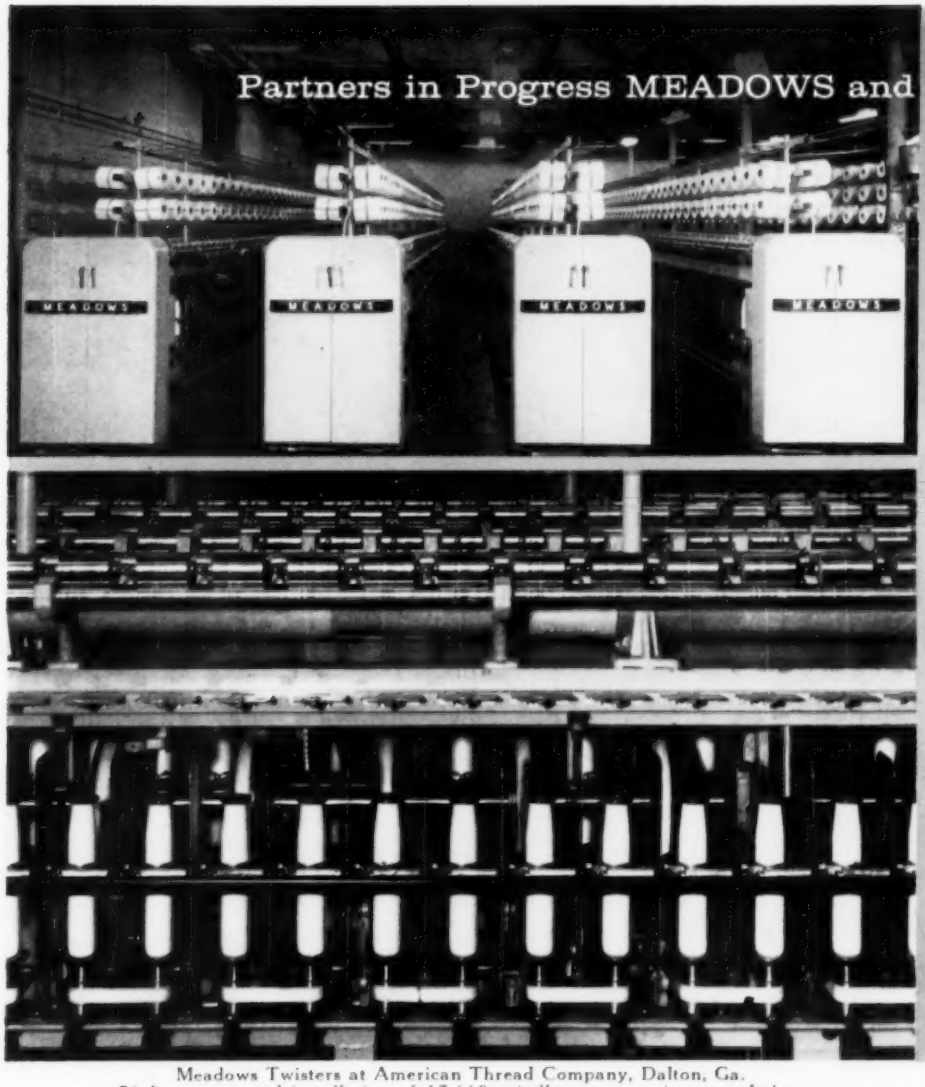
► And **A. G. Laughridge,** below, can well be proud of his 33 years as a salesman par excellence for Fafnir Bearing Co. Retiring as southeastern sales manager recently, "Stick" was

given a farewell dinner by officials and friends at Fafnir. He is responsible for much of the bearing progress in textiles. Friends can locate him at RFD #1, Highlands, N. C.

Want To Buy

Reader **H. E. New,** Engr. (Fibers) Dow Chemical Co., Warwick, Va., wants more on Toenniessen Yarn Inspection Machine (Aug.) of Watson & Desmond. **Philip S. Benoit,** Pacific Mills, Halifax, Va., asks for more on C. M. C. (Hercules) warp size ad

(Continued on page 24)



Fafnir Mechani-Seal Wide Inner Ring Ball Bearing with Self-locking Collar—easiest bearing of all to install—features frictionless, slinger-type seal that effectively locks in pre-packed grease and protects against contaminants on high-speed applications.

Fafnir Plya-Seal Radial Ball Bearing has contact-type seal that offers positive protection against lint, moisture, dirt, and oil drip. On many applications, relubrication is unnecessary.

Meadows Twisters at American Thread Company, Dalton, Ga.
76 frames, a total installation of 17,660 spindles now nearing completion.

"As completely anti-friction as a frame can be made..."

New MEADOWS TWISTER equipped with FAFNIR Ball Bearings

"As completely anti-friction as a frame can be made", is the way Meadows Manufacturing Company describes its new twister. Gear end studs, roll stands and drive pulley shaft are all mounted on ball bearings. The frame is equipped with two ball bearing tension pulleys for easy reversing. Even the builder motion is anti-friction.

In selecting the bearings for this advanced-design frame, Meadows overlooked no opportunities . . . drew on Fafnir's long experience with textile machinery bearing applications. Result? Bearings exactly suited to the jobs they do. Plus, significant production savings—made possible by such famous Fafnir features as the self-locking collar that permits simple bearing installation.

Fafnir ball bearings also save maintenance. Mechani-Seals and Plya-Seals keep factory-packed lubricant in, contaminants out, and wear at an absolute minimum. Chances are, Fafnir can help **you** cut costs, and equip for better performance, when designing calls for anti-friction bearings. Write The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR
BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

STANSET

FOR Standout Wash 'N Wear

with Stanset chemical reactor resins, your fabrics:

- ACHIEVE MECHANICAL AND CHEMICAL FINISHING EFFECTS WITH LASTING WRINKLE AND SHRINK RESISTANCE.
- STAND UP AFTER REPEATED LAUNDERINGS.
- RETAIN THEIR APPEARANCE AND SHAPE FOR GREATER LENGTH OF TIME.
- "LOOK YOUNGER LONGER."

Many of STANSET's friends are enthusiastic about the above features of STANSET and also about the extremely low tensile loss due to chlorine bleaching, as well as its superior non-yellowing characteristics.

There are other features about STANSET chemical reactor resins *you should know*. If you would like to receive additional material regarding STANSET, write us — we'll be glad to send it to you. There's no obligation. Remember — the sooner you learn about all of STANSET's excellent characteristics, the sooner you can put them profitably to work for you.

STANDARD CHEMICAL PRODUCTS INC.

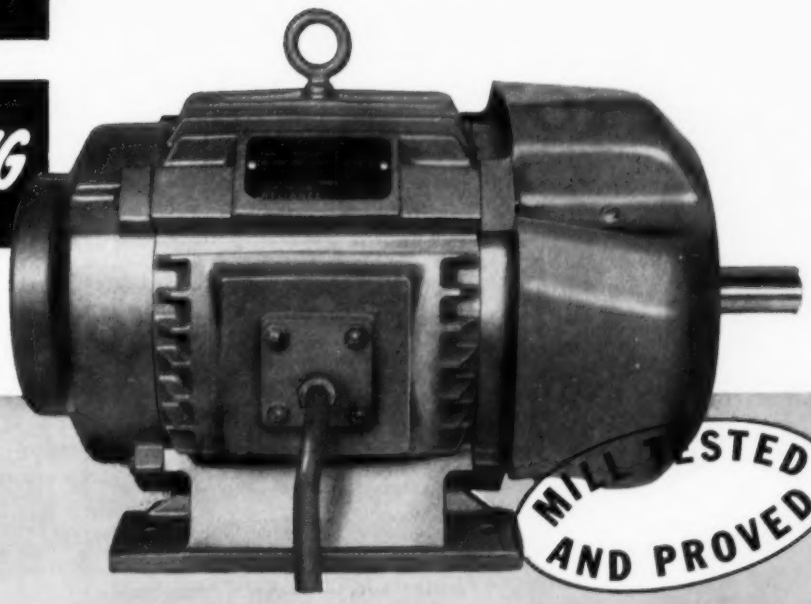
HOBOKEN, NEW JERSEY • CHARLOTTE, NORTH CAROLINA

NO MORE MOTOR CLEANING

The *new* Reliance Lint-Proof Textile Motor is totally enclosed, positively eliminating lint-clogging. Lint-filled air cannot penetrate the sealed motor housing, and the high velocity cooling fan blasts lint off the outside of the motor.

It will pay you to try these new textile motors and see how they cut operating costs by eliminating motor cleaning.

Now available—1-20 hp. general purpose, air-cooled textile motor for application on spinning, roving, drawing, and twisting frames . . . and on cards, openers, pickers, and other textile machines. B-1508-A



MILL TESTED AND PROVED

IT'S LINT-PROOF

RELIANCE Totally-Protected MOTORS

RELIANCE ELECTRIC AND ENGINEERING CO.

DEPT. 2010A, CLEVELAND 17, OHIO • OFFICES IN PRINCIPAL CITIES

Canadian Division: Welland, Ontario

SPARTAN MILLS USE LIFT TRUCKS TO CASH IN ON "FREE AIR SPACE"

SPARTANBURG, S. C. — Spartan Mills take full advantage of their high warehouse ceilings to sharply reduce storage costs and improve operating efficiency.

Using Hyster 2000 lb. and 4000 lb. capacity lift trucks, loom beams, flat cloth bolts, cloth rolls and cotton bales are stacked in the "free air space" —utilizing convenient storage space that had been previously wasted. Costly yard space and the necessity of purchasing additional warehouse space have been eliminated.

Awkward, heavy hand-labor jobs, such as moving looms, unloading bales from trucks and in-plant hauling are handled up to five times faster with the two Hyster Lift Trucks. Replaced manpower has been diverted to more productive operations.

Your Hyster Dealer makes it his business to keep up with the materials handling problems of the textile industry. He is able to help *you* make important materials handling savings. Call him today.

ABOVE: Bales are stacked five high, three bales at a time, utilizing space near ceiling.

LEFT: Hyster 2000 lb. capacity Truck unloads incoming cotton bales two at a time.

Call your Hyster Dealer. He is in the yellow pages under "Materials Handling" or "Trucks-Industrial"

HYSTER COMPANY

Hyster Industrial Trucks Reduce Costs for Textile Mills

Factories: PORTLAND, OREGON
DANVILLE, ILLINOIS
PEORIA, ILLINOIS
NIJMEGEN, THE NETHERLANDS

Shorts and Remnants

(Continued from page 20)

(June); **Godfrey Bloch,** Duraloom Carpet Mills, Lehighton, Pa., wants electromechanical pick motion (Huyck) from June TI; **Mitchell A. Wallman,** Wallman Mills, New York, wants aluminum twister bobbins (Allentown Bobbin); **F. F. Ripley,** Troy (N. H.) Blanket Mills, writes for more on Scotch Brand double coated tape ad Aug.; **Frank Cooper Rug Co.,** Scranton, Pa., wants crown-faced split pulleys; **Motte - Bossut,** (un Directur), Roubaix, France, wants name of manufacturer of "Eponite" 100 from Feb. '57 article on "Crease Proof Fabrics." **Mario Pujol Maynou,** La Colonia S. A. Puebla, Mex., writes for data on SRRL slasher briefly mentioned Aug. TI saying " . . . being our intention to buy one. . . " (And even noting an associate coming to N. Y. with this in mind.) **Henry Blocker,** Engr., Avondale Mills, Sylacauga, Ala., wants further data on Saco-Lowell drawing frame ad.

► New plants are being planned by Ribbon Fabric Co. of Cuba S. A., Havana, whose **Fernando Beiro** writes to know if there "are any general recommended building specifications compiled and published" (for dye, bleach, finish plant for cotton and synthetic woven flat goods); **Allen Sance,** Kutz Textile Co., Inc., Boston, has foreign firm looking for machinery, etc., to set up cotton waste utilization plant.

► It looks like the foreman or overseer can be proud, too if he fits the following poem from our good friend Watson J. Wood of Knitters Ltd. who read this one at the first meeting of the Lindsay (Ont., Can.) Foreman's Club.

Foreman 1957

A leader of men; and a shock absorber
Sandwiched between bosses and men;
A diplomat, who can prove he's the buffer
By his words, by his deeds, and his pen!
A professor, without the prestige of a college;
Where industrial production's mighty rule
Tunes the mind to a greater knowledge,
Producing goods alone, pays the way of every school!
Where youngsters work, a father he must be;
From accidents guard, and watch their every spree.
And by kindly discipline, let the whole world see
That work brings results, and keeps a nation free!
Like the arts, his greatness soon *must* show,
For from this knowledge does our real wealth grow.
And his honor the whole world will span,
And his signature be prized; Joe Citizen—Foreman!

► And TI can be proud of the posters

NEW!
Dramatic cost savings and higher bleaching quality...

SOLVAY

ACTIVATED HYDROGEN PEROXIDE BLEACHING PROCESS for COTTON

The new SOLVAY Activated Hydrogen Peroxide Bleaching Process for cotton produces goods of better quality at a considerable savings in bleaching chemicals. This savings in chemical costs may run as high as 50% and at the same time produce goods of increased purity, higher whiteness, lower color reversion tendencies, lower ash and metals content, and higher absorbency rates, even when moderately hard water is used. All of these desirable characteristics are realized without harm to the goods.

Extensive laboratory and plant tests have proved the practicability of this process which is now in successful, continuing full-scale commercial operation.

Details of process offered!

Without obligation, write for this new SOLVAY brochure. It describes the equipment and techniques and results you can expect, in setting up the SOLVAY Activated Hydrogen Peroxide Process in your operation. Application for a patent covering the SOLVAY Activated Hydrogen Peroxide Bleaching Process has been filed. The process is available to bleachers under a royalty-free license.

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL & DYE CORPORATION
61 Broadway, New York 6, N. Y.

☐ Please send me without obligation your brochure, "SOLVAY Activated Hydrogen Peroxide Bleaching Process for Cotton."

☐ Have one of your representatives call to discuss it.

NAME_____

POSITION_____

COMPANY_____

PHONE_____

ADDRESS_____

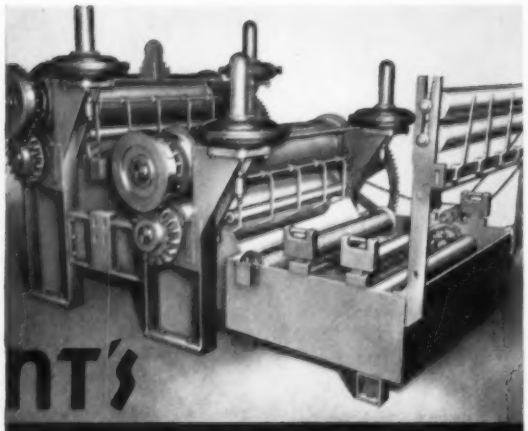
CITY_____ ZONE_____ STATE_____ EN-10

SOLVAY

Soda Ash • Caustic Soda • Calcium Chloride
Chlorine • Potassium Carbonate • Sodium Bicarbonate • Caustic Potash • Chloroform
Ammonium Bicarbonate • Cleaning Compounds
Ammonium Chloride • Sodium Nitrite • Aluminum Chloride • Snowflake® Crystals • Methyl Chloride
Monochlorobenzene • Para-dichlorobenzene • Ortho-dichlorobenzene • Vinyl Chloride • Hydrogen Peroxide • Methylene Chloride • Carbon Tetrachloride

No More Broken Ends

SARGENT'S NEW DESIGN



BACKWASHER and BACKWASH DRYER

ANY FIBRE - ANY BLEND

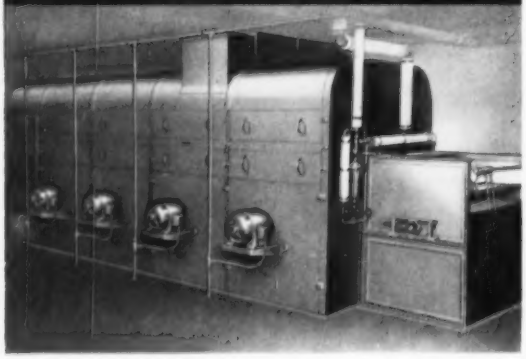
For washing and drying sliver as it comes to the cards

•

For final washing of top before finisher gilling

•

For rinsing and setting of dyed top in ball form



Up to 48 three-ounce ends run through simultaneously — better than 700 lbs. hourly production of card sliver . . . SARGENT-designed so ends are threaded through more easily and quickly than ever before.

Switches on backwasher drives, dryer conveyor, and on gill box are synchronized to start and stop in unison, eliminating danger of broken ends.

Added ease of inspection of ends being dried . . . completely automatic, continuous operation throughout . . . remarkably simple to install, wonderfully easy to operate.

Want more information? Just write your nearest representative or write us direct. And ask for Bulletin No. 203

C. G. SARGENT'S SONS CORPORATION

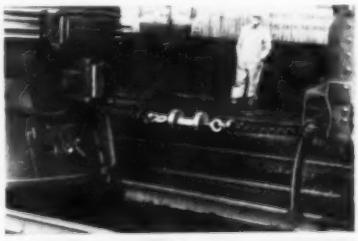
Graniteville, SINCE 1852 Massachusetts

PHILADELPHIA 19 — F. E. Wesson, 519 Murdock Road
CINCINNATI 15 — A. L. Merrifield, 730 Brooks Avenue
CHARLOTTE, N.C. — W. S. Anderson, Carolina Specialty Co.
ATLANTA, GA. — J. R. Angel, Mortgage Guarantee Building
TORONTO 1, CAN. — Hugh Williams & Co., 27 Wellington St. East

Shorts and Remnants

suitable for use on mill bulletin boards (July, Aug., Sept., Oct.) and the mill interest in these. To **L. Vance Reece, Jr.,** Fieldcrest Mills, Inc., Spray, N. C., who wrote for posters on waste control; and to **Paul J. McGinley,** Safety Dir. Owens-Corning Fiberglas Corp., Ashton, R. I., asking for posters on good housekeeping—"thanks for the ideas." TI does not operate a "poster service" but presents these as manufacturing hints with reprints free for mill boards. Added requests come from **W. Huffman,** Personnel Dir. Burlington Industries, Burlington, N. C.; **J. L. Thompson,** Controller Cramerton (N.C.) Mills; **P. H. Dougherty,** Pur. Agt. Sellers Mfg. Co., Saxapahaw, N. C.; **Donald W. Rich, Jr.,** C. H. Masland & Sons, Carlisle, Pa.; **G. E. Larraber,** Machias (Me.) Mill Inc. Some like **Earle R. Stall, Jr.,** Mgr. American Spinning Plant, Cone Mills Corp., Greenville, S. C., put in standing orders for each poster.

► Some folks go at it the hard way, but National Vulcanized Fibre Co. hooked up a special test harness to show that a Lestershire textile bobbin with vulcanized head and hard



maple barrel could pull a 368-ton, 18-car freight train (train courtesy B & O). We guess this good advertiser should be proud of even thinking up this idea, as well as the bobbin.

If the reader from High Point, N. C., wanting more data on National Vulcanized Fibre Co. Aug. ad sees this, please note "you forgot to sign your name." We hope you also wrote directly to these folks.

Acetylated Cotton

S & R has a reader in **D. L. Wardell,** Sandoz, Inc., N. Y., who writes to

WHITIN Facemaker* TWISTERS

Consistently Ahead in Production, Performance and Quality

Whitin Pacemaker Twisters have established unsurpassed performance records for their high production, yarn quality, minimum maintenance and operating costs. For cotton and spun synthetic yarns, they are available in 3½" - 6" gauge with 2½" - 4½" rings and with traverses up to 11" depending on yarn and mill requirements. Their notable features are:

- Front bottom roll arrangement to provide a yarn path that is in almost vertical line from bottom of front roll to the guide.
- Laminated bakelite gears meshing with metal gears in the head end, for noise reduction and long wear.
- Spring counterbalanced ring rail.
- Spring weighted anti-friction tape tension pulleys.

ALSO AVAILABLE

- Steel pulleys on continuous drive shaft for spindle drive.
- Slotted ring rails for full length stationary separator blades.
- Stationary guide rod behind spindles for supporting ring rail traversing mechanism which prevents contamination of yarn when ends are down.
- Ball bearing or roller bearing spindles.

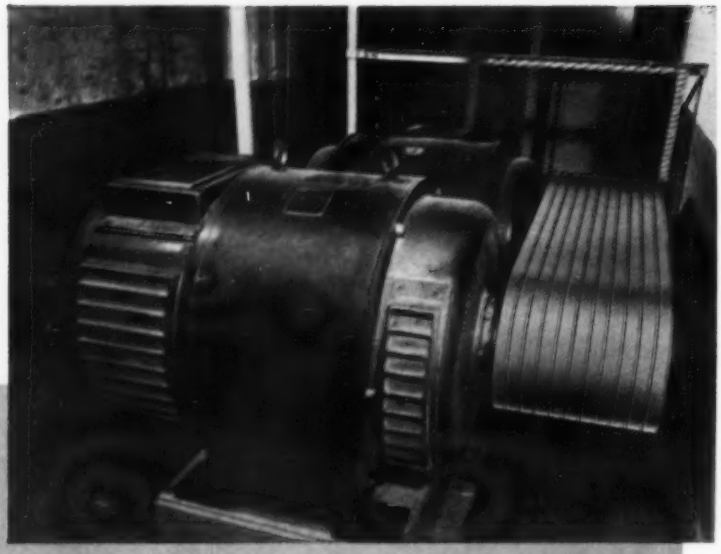
Write today for our folder giving detailed information

*Whitin MACHINE WORKS

WHITINSVILLE, MASS.

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

*Trade Mark



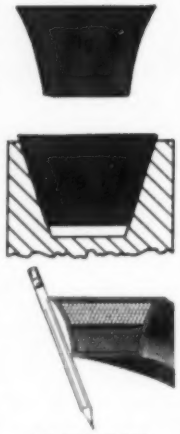
How CONCAVE SIDES cut V-belt costs

By this simple test you can see for yourself how the concave sides (Fig. 1) of the Gates V-Belt lengthen the life of the belt... *thus reducing* costs.

Just bend a Gates V-Belt and feel the sides. You will see that these precisely engineered concave sides have now *become straight*, permitting them to grip the sheave groove evenly. (Fig. 1-A). This assures longer belt life; lower costs.

Now make the same test with a straight-sided belt. (Fig. 2) Notice how the sides bulge out on the bend (Fig. 2-A) concentrating the wear at the points shown at arrows.

These tests should convince you that it *pays* to specify the V-Belt with Concave sides—Gates Vulco Rope...readily available from nearby distributors.



THE CONCAVE SIDE
U.S. PAT. NO. 1813698

TPA 199

Gates Distributors are in the Yellow Pages

World's Largest Maker of V-Belts

The Gates Rubber Co.
Denver, Colorado

There are Gates Engineering Offices and Distributor Stocks in all industrial centers of the U. S. and Canada, and in 70 other countries throughout the world.

Gates VULCO ROPE Drives

Shorts and Remnants

this "ever-interesting column" to get names of any makers of partially acetylated cotton filter cloths, conveyor belts, net and seine twine, vulcanized cloth. Only trouble is, we can't locate anything of partially acetylated cotton but fabric for home ironing board covers.

However, if an unsigned letter from Amilon International, Atlanta, Ga., is true, a terrific increase in cotton usage is due because of a treatment that will add strength, luster, mildew- and rot-resistance with big savings in dyes for cotton. So cotton folks can start cheering. So synthetics folks had better beware, and don't say we didn't warn you.

► All of which reminds us that "Flammable Fabrics" Oct. '53 still draws reprint requests such as from **Harvey H. Hannah,** Federal Trade Commission, Washington, D. C., and from Dept. of Home Economics, U. of Cal., Berkeley, Calif.

► Another firm can be proud of its 35th Anniversary. Standard Chemical Products Inc., Hoboken, N. J., and Charlotte, N. C., celebrated the occasion recently at their Charlotte plant.

Where Is Knitting Industry?

"Do you have any tabulation, chart, graphic representation, or similar data, which would give me an over-all picture on the 'Geographical Distribution of the Knitting Business' in the United States? . . ."

SAMUEL POWEL
Mgr. Burson Plant
The Kendall Co.
Rockford, Ill.

► The best material available on this subject is the "Statistical Survey" issued by Textile Machine Works, Reading, Pa.

Standard Wool Fabrics

"It would be much appreciated if you would kindly favor us with reprints of Part I and Part II of 'Standard Wool Fabrics Are Not Standard' [May & June '57] . . ."

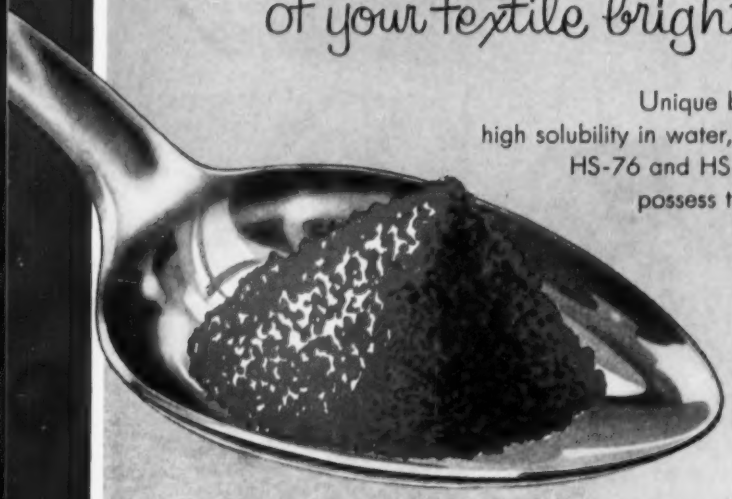
J. P. REDSTON
E. F. Drew & Co., Inc.
New York, N. Y.

From 1949

"Would you be so kind as to send to my attention a copy of the bulletin

BLANCOPHOR HS BRANDS

for the "Easy Solution" of your textile brightening problems...



Unique because of their exceptionally high solubility in water, BLANCOPHOR HS-71, HS-76 and HS-31 optical whitening agents possess these quality features:

- ✱ Recommended for pad or mangle application on cotton and rayon fabrics.
- ✱ Work well alone or together with usual finishing ingredients—resins, starches, fillers, softeners, etc.
- ✱ Produce clear, brilliant whites on bleached textiles.
- ✱ Outstanding in their level dyeing properties.
- ✱ Suitable for use in all types of equipment, such as jigs, reel or package machine.

THE POWDER FORM

BLANCOPHOR HS-71 and HS-76

THE NEW LIQUID FORM

BLANCOPHOR HS-31

BLANCOPHOR HS-31, the new liquid form, is easy to use—there's no need to dissolve powders.

Write today for more detailed information on the application of liquid form Blancophor HS-31 and powder forms, Blancophor HS-71 and HS-76.

From Research to Reality

ANTARA gaf

ANTARA CHEMICALS

A SALES DIVISION OF

GENERAL ANILINE & FILM CORPORATION

435 HUDSON STREET · NEW YORK 14, NEW YORK

SALES OFFICES: New York • Boston • Providence • Philadelphia • Charlotte • Chattanooga • Chicago Portland, Ore. • San Francisco • Los Angeles. IN CANADA: Chemical Developments of Canada, Ltd., Montreal

Blancophor HS-71, HS-76 and HS-31 manufactured by General Aniline & Film Corporation are sold outside the United States under the trade names, respectively, Tintofen DP, Tintofen D and Tintofen DP Liquid.

BENNETT ROSE COMPANY
MATERIALS HANDLING EQUIPMENT
WILL CUT YOUR WEAVE ROOM COSTS

FILLING BOX RACKS
(patent applied for)

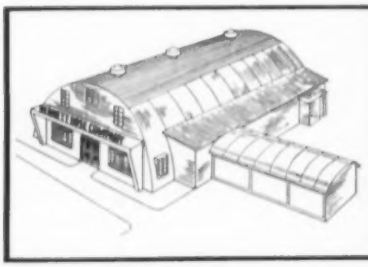
Sturdily built and efficient—holds two full boxes of filling. Each box holds approximately a half a frame of filling, 130 bobbins, with each bobbin lying crossways with the butts all on the same side. The RACKS are placed beside the looms so that the dispensing spout will be just over the battery filling. The dispensing spout is lined with stainless steel as is the filling box. A battery filler can fill up to twice as many batteries than from a tub or basket. There is a side ledge to hold an empty box after the front box is emptied so that the rear full box can be pulled down into position for the dispensing spout.

FILLING BOXES: Used for doffing the filling in the Spinning Room from where they are transported to the Weave Room and mounted on Racks (see above) installed at the looms. Boxes may be made of galvanized metal with a stainless steel bottom, or of all stainless steel with perforations for the steaming process also. They can be furnished in various sizes.
(Available with or without dispensing feed-lip.)

FILLING BOX TRANSPORT

This Filling Box Transport is of all steel construction — is used to handle the Filling Boxes from the Spinning Room to the Weave Room — with four shelves holding 20 boxes. May be equipped with any casters. (By using this BENNETT ROSE Battery Filling System a mill can save from 30 to 50% on its battery filling costs and pay for this equipment in from 12 to 20 months.)

Send for further information. Write for our latest catalogue.



BENNETT ROSE COMPANY
P. O. BOX 8
ROEBUCK, S. C.

Shorts and Remnants

on 'Drafting Long, Finer-Fiber Cottons on Super-Draft Roving Frame' [Mar. '49] . . . "

W. M. POAG
Supt. J. P. Stevens & Co., Inc.
Greer, S. C.

► Here's a tip for our readers. Stan Suchecki, our good associate editor in New England, reports a Canadian mill executive reads TI in his morning bath to wake him up and start the day right. Don't try it in the shower. We don't want you to write us that TI is "all wet."

► Everybody seems to have desk or wall signs. Recent ones - "WHY SMILE — KEEP WORRYING" "WORK FASTER, YOUR WORK NOW IS ONLY HALF-FAST" and the "Houghton Line" of good adv. E. F. Houghton & Co., Phila., follows this last one with the July back cover which advises "Don't start any vast projects which are based on half vast ideas."

► More requests for June '57 "Tufted Textiles" reprints come from **Noble Killebrew,** Celanese Corp. of Amer., Charlotte, N. C.; **N. V. Katoenspinnerij,** Bamshoeve Enschede, Holland; Algemene Kunstzijde Unie N.V., Arnhem, Holland.

► And the Saltykov - Shchedrin State Public Library of Leningrad wants to exchange periodicals, but we can't read Russian. But we did supply reprints on request from **Stefan Bontcheff,** Varna, Bulgaria, a little closer home. Hilados ABC, S.A. Mexico D. F., writes for help in getting suitable mill manager for 10,000-spindle new machinery mill in Mexico City. Anyone for Mexico?

► As for ole S&R, he's for TI with the largest and most responsive mill readership of any textile book anywhere.

► Be careful on Hallowe'en. Don't let those goblins and black cats get you.

"... now watch this motion ..."

Occasionally our minds stray from *our* work, but our minds don't stray from *your* work.

If you want to let your mind stray from *your* work, send the problem to us.

Your work becomes our service.

warp Sizing: *Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing, Waxes.*

Wet Processing Chemicals and Auxiliaries: *Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.*

Niagara Twist-Setter: *Yarn Conditioning Penetrants.*

Seyco Warp Lubricator.

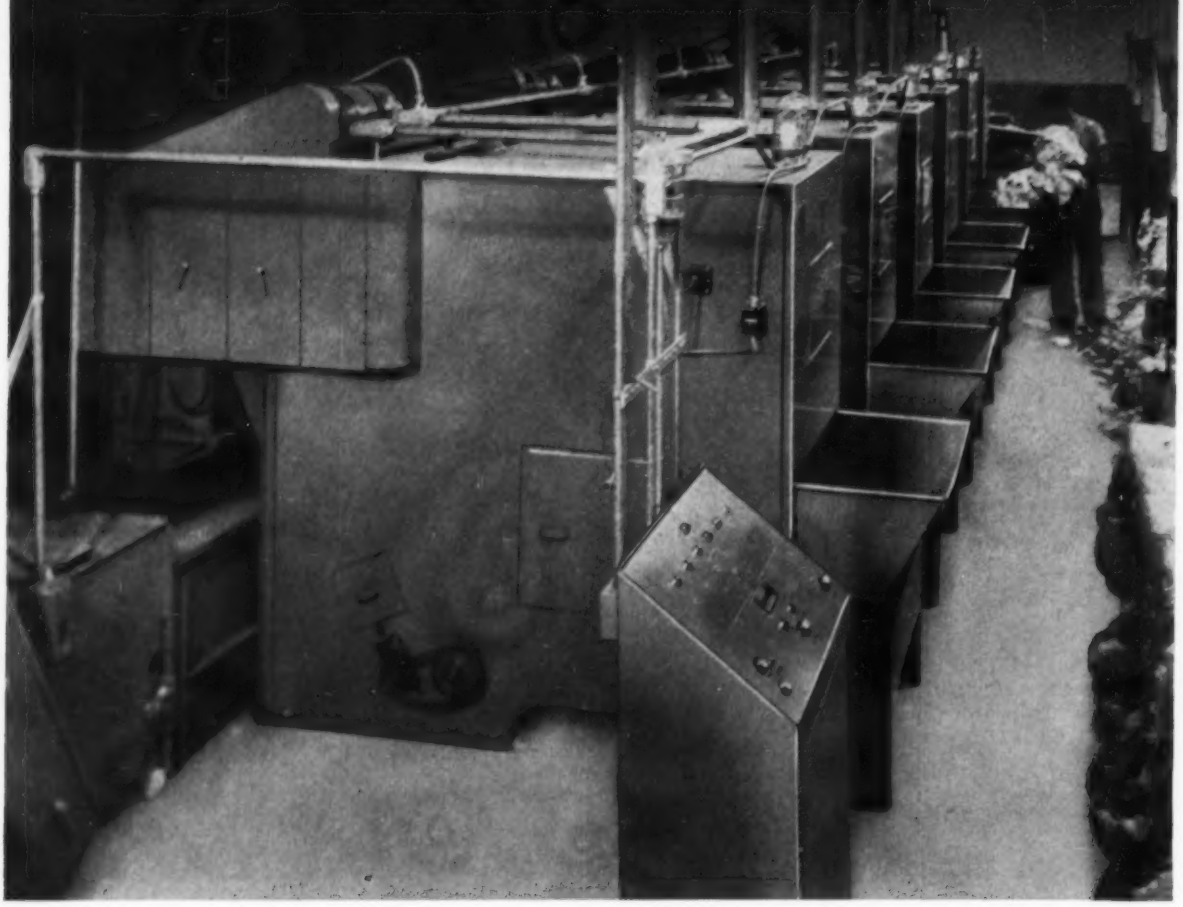
Headquarters for textile chemicals

SEYDEL-WOOLLEY & CO.

748 RICE STREET, ATLANTA, GEORGIA

SEYCO

HUNTER FiberMeter® HOLDS BLEND VARIATION DOWN TO 1%



The Hunter FIBER METER adds this new high degree of precision to feeder operations. Automatic weighing and blending eliminates human error, assures virtually foolproof quality control. And a Fiber Meter Automatic Blending System can cut as much as ⅔ off your Opening Room labor costs.

IMPROVES BLEND — The Fiber Meter cuts reject losses due to filling bands, reduces ends down in spinning, raises break factor. Many mills rely on it to maintain quality, while effecting savings with less expensive fibers in the mix.

PRECISE CONTROL — Can be adjusted to weigh any quantity from 2 to 32 ounces at the beginning of the run, and needs no further adjustment. Hopper depletion, mechanical or electrical failure of any individual unit halts the entire line immediately. An imperfect batch cannot slip through for further processing.

COMPLETELY FLEXIBLE — Advanced design makes it easy to clean and set up the Fiber Meter for a new blend or new fibers. Accurate weight graduations permit full mixing flexibility too — even minute quantities of a fiber can be distributed uniformly throughout the mix. Capacity of the system ranges up to 500 pounds per hour per Fiber Meter.

Volume production; higher, more uniform production; lower manpower costs — the Fiber Meter can add all of these profitable extras to your processing picture. Send for complete details now. Write for the new Fiber Meter Bulletin.

JAMES HUNTER

JAMES HUNTER, INCORPORATED • GREENVILLE, SOUTH CAROLINA

A SUBSIDIARY OF JAMES HUNTER MACHINE CO. • NORTH ADAMS, MASSACHUSETTS

General Electric says:

"On the average, only 1 out of 100 G-E Lamps will burn out during the first year of service in a single shift operation."

Harold Kilburg, electrical contractor, says:

"Out of 5,150 G-E Lamps we installed a year ago, we've had to replace only 20. That's 1 out of 250!"

MR. KILBURG (center), president of Kil-Bar Electric Co., Chicago, inspects one of the G-E Lamps that has given such excellent service. Leo Carmody (left), wholesale agent salesman, and Larry King, G-E Lamp Salesman, worked together on this installation.

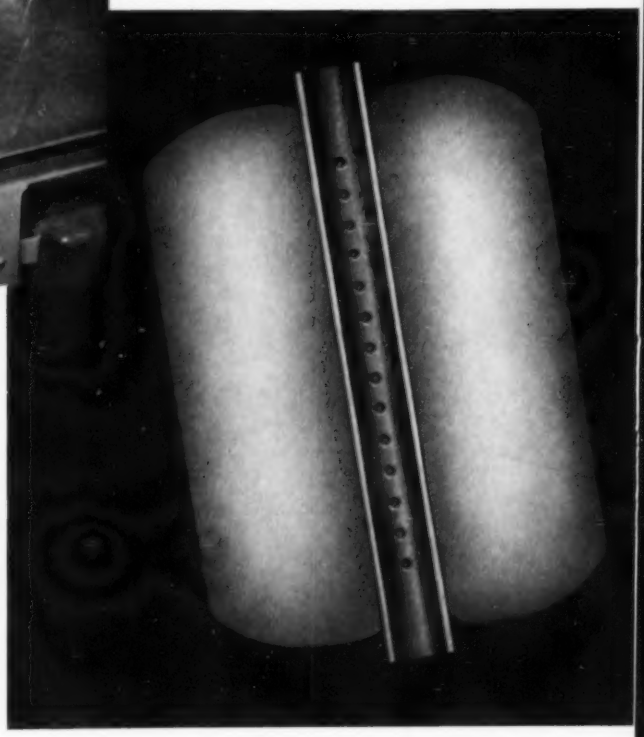
YOUR *cost of light* is about 10 times the cost of the lamps. It's also the cost of the electricity they use . . . and the cost of maintaining the system. If you buy lamps with unpredictable life, you'll have lots of early burnouts which require individual replacement. But G-E Lamps have a uniform life with few early burnouts. This means you can schedule an economical group relamping program (replace all your lamps at the same time) and realize big savings in maintenance that far outweigh the little light left in the lamps. For full information on this way to improve your lighting and save money, too, write: General Electric Co., Large Lamp Dept. TI-107, Nela Park, Cleveland 12, Ohio.

Progress Is Our Most Important Product

GENERAL ELECTRIC

G-E LAMPS GIVE YOU MORE FOR ALL YOUR LIGHTING COSTS

the "inside



Here's the real "inside story." When particle-size is not uniform, particles agglomerate, filter out and build up on package sides and at the core, as illustrated by left cross-section. When particles are uniformly dispersed, penetration is even, as shown on right hand package. Dye yields improve, waste is minimized.

Laboratory and mill results show that National Carbanthrene® Dyes are unsurpassed in cleanliness and dispersibility! New manufacturing techniques developed by National Aniline Research produce vat dyes that fully meet the strict requirements for pigment application.

One by one, these improved dyes have been introduced commercially without fanfare or publicity. Their names have not been changed. Nevertheless their superiority has been immediately apparent to dyers.

Dyeings are cleaner, more uniform and free of speckiness. Results are always precisely predictable. Better dye yields are frequently realized. Dyes are easier to handle in storage and processing.

Now it can be told . . . story" of National® vat dyes today!

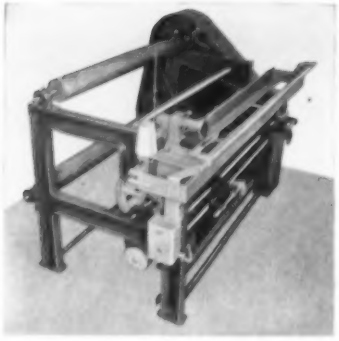
These American-made vat dyes are a tribute to the intensified program being carried on at our multi-million dollar Buffalo Research and Engineering Center. They demonstrate anew that it always pays to – call National Aniline first.

NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.

Akron Atlanta Boston Charlotte Chattanooga Chicago Columbus, Ga. Greensboro Los Angeles New Orleans Philadelphia Portland, Ore. Providence Richmond San Francisco Toronto

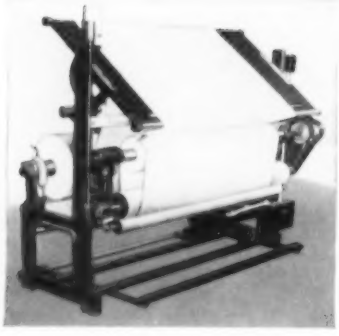
National Aniline Allied Chemical



DUPLEX SEWING AND WINDING MACHINE sews loom rolls together for continuous shearing

SELVAGE LOOP CUTTER prepares cloth for shearing

M-125 SHEAR for synthetic and cotton fabrics



S 2A UNISPEED INSPECTOR for synthetic fabrics

Your finished fabric represents your most expensive item . . . so waste here is more costly—both for labor and materials—than in any other operation in your mill. Thus, your answer is better cloth finishing . . . overall cost is small, but improvement in the appearance and the cleanliness of your cloth is great. If you agree . . our engineers are ready and qualified to help you.

CURTIS & MARBLE MACHINE CO.

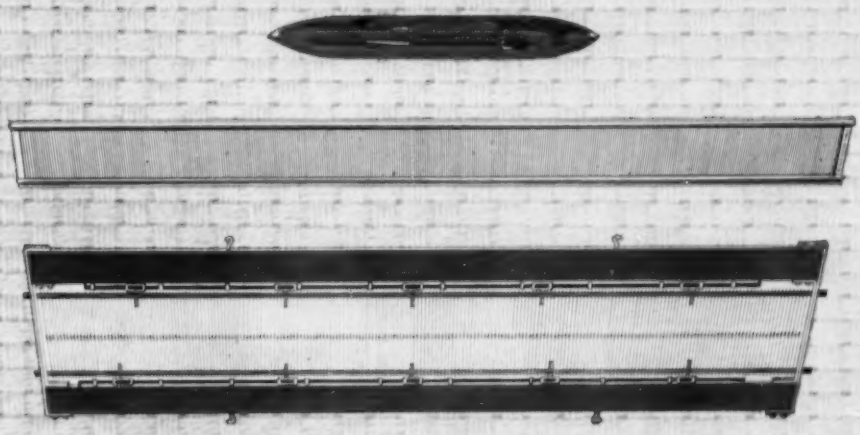
Serving the Textile Industry for more than 125 years

72 CAMBRIDGE STREET • WORCESTER 3 • MASSACHUSETTS

SOUTHERN SALES & SERVICE • SOUTH CAROLINA NATIONAL BANK BUILDING, GREENVILLE, S.C.

from **Stehedco**

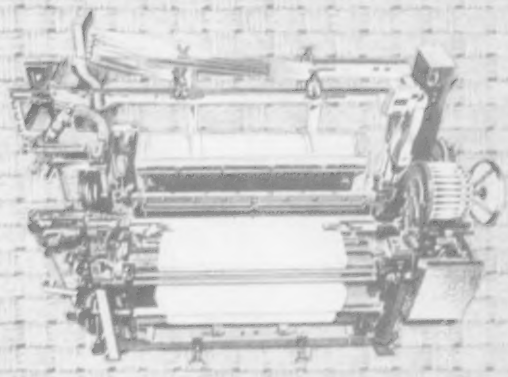
FOR PERFECT WEAVING



When you buy Stehedco Products you get the finest Quality and Service, and in addition, you also get the Engineering know-how from over 50 years experience. Since 1898, Stehedco has been the Leader in developments and improvements for better Quality and more efficient weaving.

Stehedco offers you the MOST COMPLETE LINE of Heddles, Frames, Reeds and Shuttles for any type loom weaving any type goods . . . from fine filament to heavy duck, and from narrow ribbons to widest felts. They are all proven for Quality and assure you of PERFECT WEAVING.

Let our well qualified Sales Engineers recommend the products best suited for your particular application.

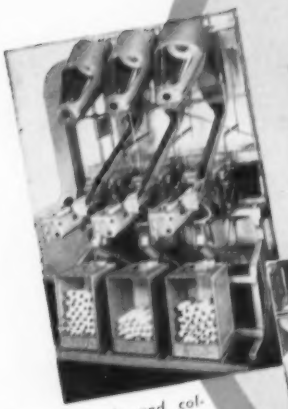


Stehedco
STEEL HEDDLE MFG. CO.
PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
GREENVILLE, S.C.
Southern

Other Plants and Offices: Granby, Quebec, Canada—Lawrence, Mass.—Greensboro, N.C.—Atlanta, Ga.—Textile Supply Co., Dallas, Texas—Albert R. Breen, Chicago, Ill.

K-5704

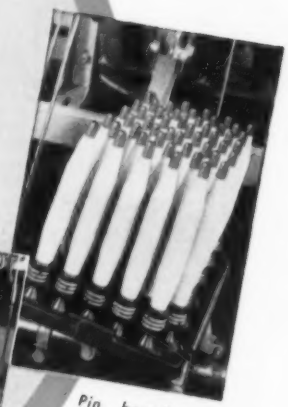
A few of the many types and sizes of filling bobbins that can be profitably run on the Fill-Master Winder.



Exhaust hoods and collectors for mills having dust and fly in winding area.

Multi-cell empty bobbin magazine for magazine creeling or single packages.

Packing device for orderly, clean storage of filled bobbins.



Pin boarding arrangement for synthetic yarns.

Only the Whitin-Schweiter FILL-MASTER* Filling Winder Gives you such Complete FLEXIBILITY and ADAPTABILITY

Whitin-Schweiter Fill-Master* Winder with Bobbin Loader

Flexible . . . . for fully automatic winding of cotton, wool, worsted, synthetics and blends.

Adaptable . . . to a broader range of mill requirements than any other winder thru its complete line of optional accessories (see illustrations)

These are only two of many outstanding advantages, including:

- Machine speeds up to 10,000 R. P. M.
- Speed of individual spindles adjustable
- Bobbins up to 10⅛" • Tail-less bobbins
- Variable layer locking traverse prevents sloughing
- Maintains uniform winding diameters, resulting in more yardage per bobbin

*Trade Mark

Whitin MACHINE WORKS

WHITINSVILLE, MASS.

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, N

Manufactured by **WHITIN** *for sale in U. S. A. and Canada*

and by **SCHWEITER, LTD., Horgen (Zurich, Switzerland)** *for sale in other countries*

TENN-ACIDS, a family of alkyl aryl sulfonic acids, offer the textile Industry new basic raw materials. Versatile, high quality, high purity detergents for wet textile processing—customized to meet your individual requirements—can be prepared easily and economically in your plant.

Investigate the merits of these new inexpensive raw materials designed specifically for the Textile Industry.

TENN-ACIDS are base detergent acids that can be neutralized to yield concentrated Inorganic or Organic Salts which function as highly effective detergents for natural and synthetic fibers.

Send me further information on **TENN-ACIDS**

Name_____

Company_____

Street_____

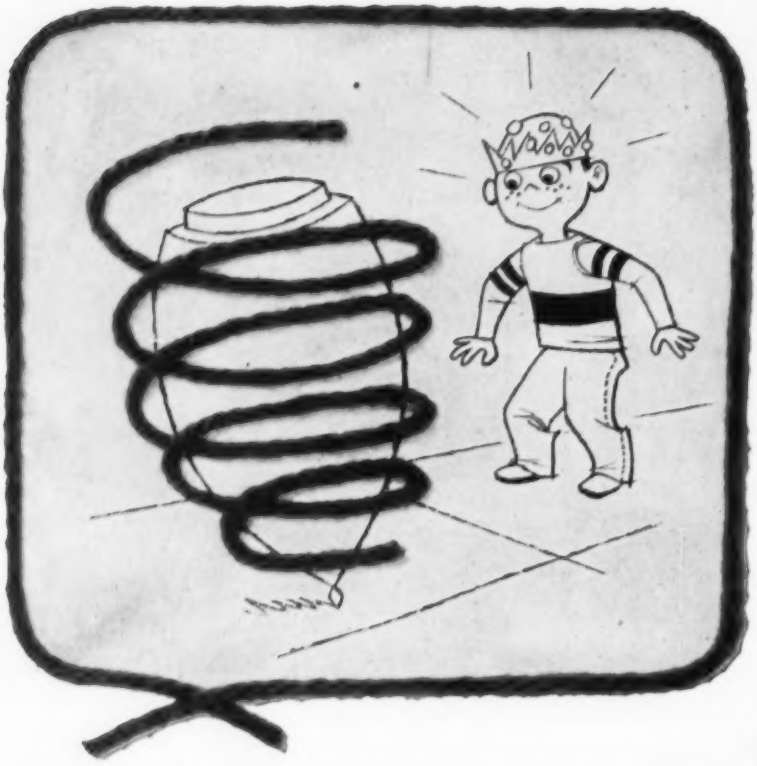
City_____

C-10 State_____

MARKETING RESEARCH AND DEVELOPMENT DEPARTMENT

TENNESSEE TC CORPORATION

1330 West Peachtree—Suite 500—Atlanta, Ga.
Phone: TRinity 5-6616



TOP SPINNING PERFORMANCE...

Tired of toying with travelers that fall short of your spinning and twisting requirements? Play it smart and look into National-Sterling Ring Travelers now!

Whether you're running cottons, wools, synthetics or blends, you'll find that National Travelers consistently deliver more pounds of first class yarn . . . at higher spindle speeds . . . with fewer ends down. Each is designed to meet your highest standards for precision balance, uniform weight, temper and finish.

Plan now to let an experienced National-Sterling Engineer help you select the right travelers for your particular spinning or twisting operation. Write, wire or phone National Ring Traveler Company and Sterling Division, 354 Pine Street, Pawtucket, R. I. Southern Office and Warehouse: P. O. Box 293, Gaffney, S. C.

NATIONAL *Sterling*
RING TRAVELERS

F. L. CHASE, JR., Pres. & Treas. L. E. TAYLOR, So. Mgr.

FOR SPINNING AND TWISTING ALL NATURAL AND SYNTHETIC FIBRES

There's a NATIONAL man nearby!

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H. B. ASKEW • P. O. Box 424 • Griffin, Ga.

Export Agent: A. M. ROMERO CORP., 350 Fifth Ave., N. Y. 1, N. Y.

Personal NOTES

ABOUT MEN YOU KNOW

Recently named assistant vice-president of American & Efird Mills, Mount Holly, N. C., was **Frank A. Farnell** who will work with Gene Timanus, vice-president in charge of the spun fibers division.

Upon completion of 44 years of service with Berkshire Knitting Mills, Reading, Pennsylvania, **Robert G. Ohlinger** has retired as superintendent of plant engineering.

James H. Phillips has been appointed manager of sales and production coordination for the textile division, United States Rubber Co. Mr. Phillips was formerly a marketing and economic analyst at the New

Mr. Dear

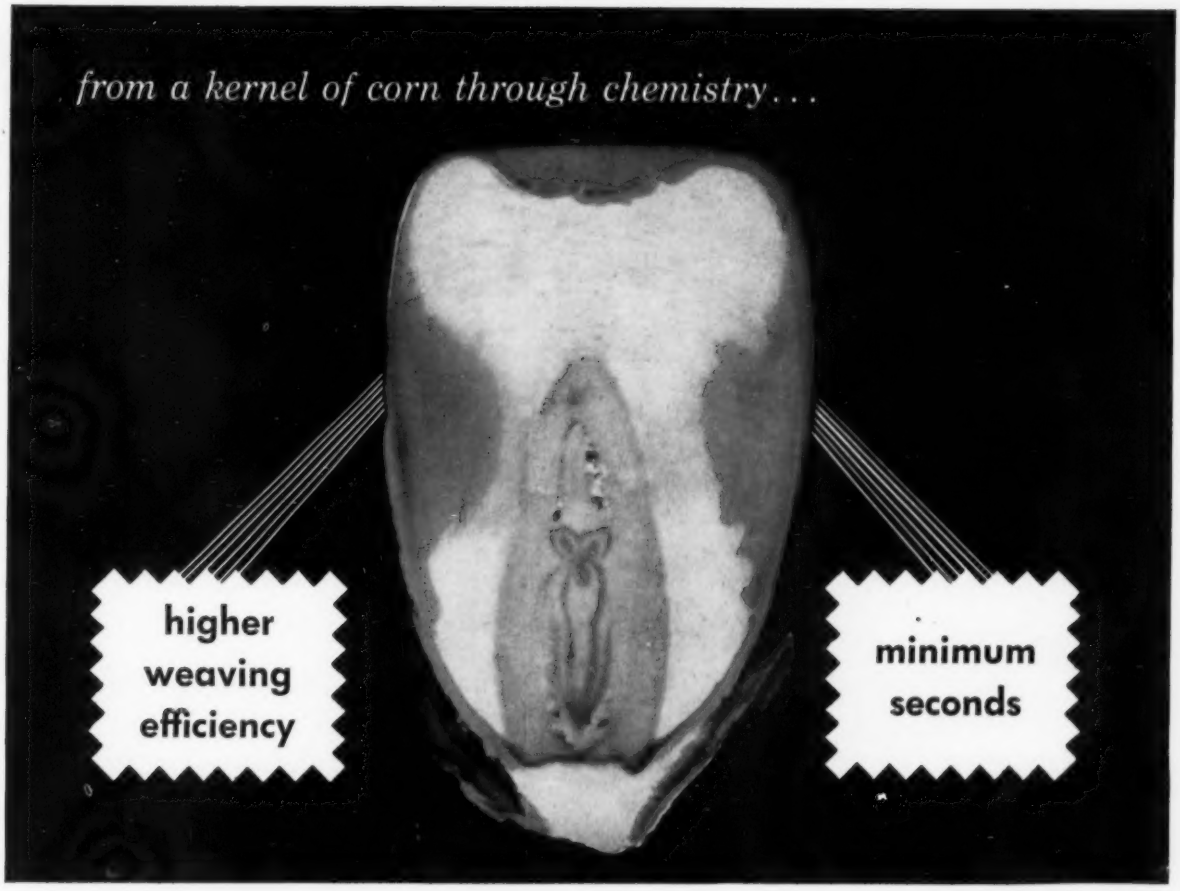
Mr. Phillips

York headquarters of the company. * * * Appointment of **Charles R. Dear** as manager of marketing research for the textile division has been announced. Mr. Dear had been acting manager of marketing research for the past six months.

John Van Nest, formerly with Goodall-Sanford and the Pacific division of Burlington Mills, is now quality control manager at Warwick Mills, West Warwick, R. I.

Edward W. "Ned" Daniel has joined Callaway Mills Co., LaGrange, Ga., as employment assistant. Mr. Daniel also is associate editor on the staff of the company publication, "The Callaway Beacon." * * * **Thomas F. Griffin** has joined the product development department of the research and development division as textile technologist. He was recently associated with Hewitt-Robins, Inc., Buffalo, N. Y., in fabric

(Continued on page 44)



NALEX®: a warp size for spun rayon and worsted yarns

NALEX is starch changed through chemistry. It is noncongealing. Because of this, Nalex improves penetration; prevents hard size; and forms stronger, more continuous films on spun rayon or worsted yarns.

The result?

Seconds are reduced. Efficiency is increased—even at low humidities.

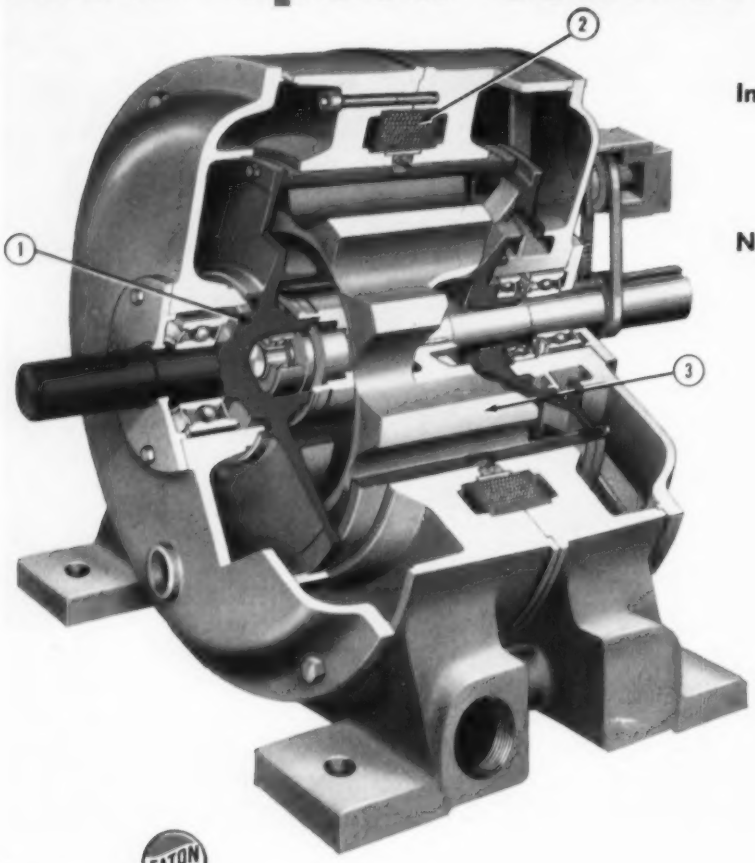
NALEX is compatible with resins and synthetic binders. Highly recommended for sizing the new blends of natural and miracle fibers.

STARCHES **National** RESYNS®

STARCH PRODUCTS INC.

National Starch Products Inc., 270 Madison Ave., New York 16, N. Y. • Atlanta • Boston • Philadelphia
In Canada: National Adhesives (Canada) Ltd., Montreal

Want Speed Control Like This?



Infinitely adjustable speed from AC power source

★

Wide speed range

★

No commutators, rings, brushes, or rotating coils

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Instantaneous response

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Remote control

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Low power losses

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Quiet, efficient operation

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Simple construction

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Low maintenance cost

1. Input Drum Assembly
2. Stationary Field Assembly
3. Output Rotor Assembly

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DYNAMATIC ®

Eddy-Current Equipment is the Answer!

Dynamatic Eddy-Current Drives, Couplings and Brakes are the solution to difficult speed control problems—in both original equipment and factory installations. Smooth, stepless acceleration and deceleration are achieved without mechanical contact between rotating members. Eddy-current braking provides cushioned, controlled stops. Dynamatic electronic or magnetic amplifier controls, in conjunction with these units, assure wide latitude in operating functions. For efficient, economical speed control, investigate Dynamatic Eddy-Current Equipment.

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for successful dyeing of acrilan-wool blends by a one-bath method .....

DECOMINE

The problem of achieving satisfactory union dyeing of Acrilan-wool blends by a one-bath method is solved by DECOMINE, developed by the Arkansas Company for Chemstrand Corporation.

A balanced cationic and non-ionic auxiliary, Decomine produces dyeings of remarkable uniformity and excellent color values.

Acid, metallized acid, metallized neutral, and chrome colors may be successfully used. However, selected colors of these groups should be used for optimum results.

Our technicians are available to assist in developing formulas for your specific needs.

We acknowledge the helpful cooperation of the Chemstrand Corporation in the development of satisfactory dyeing formulas in the application of Decomine.

°Acrilan is the registered trade-mark of the acrilic fiber manufactured by the Chemstrand Corporation.

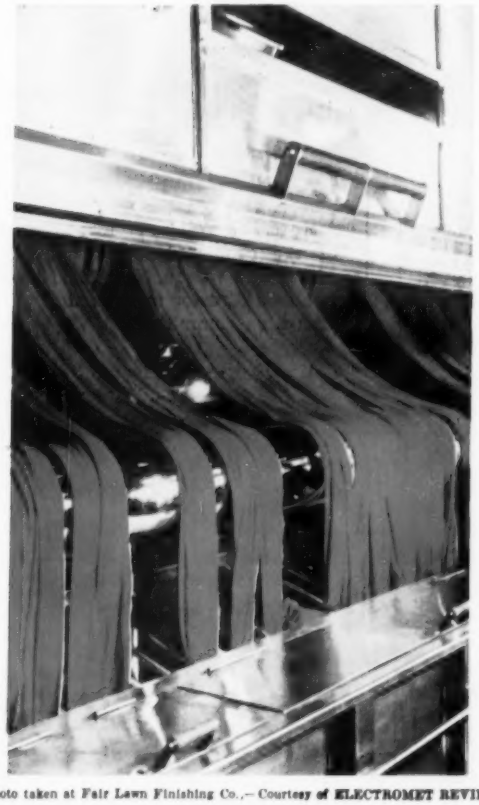

Photo taken at Fair Lawn Finishing Co.,— Courtesy of ELECTROMET REVIEW

AC INC.®

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Serving the Textile Industry for over 50 Years

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"The box is crease-resistant, too!"

No more wrinkled bolts with smudged edges when you pack your fine fabrics in rugged H&D corrugated boxes. Like to see proof? Better see H&D.

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AUTHORITY ON PACKAGING · SANDUSKY, OHIO

14 FACTORIES · 42 SALES OFFICES

Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 40)

development and other product development work.

Officers recently chosen by the Southern New England Textile Club are as follows: **Donald J. Owler** of Almardon Mills, Inc., Cumberland, R. I., president; **E. John Lownes, Jr.** of American Silk Spinning Co., Providence, R. I., first vice-president; **George D. Flynn, Jr.** textile machinery broker of Providence, R. I., second vice-president; and **Robert C. Ashworth** of Ashworth Brothers, Fall River, Mass., third vice-president.

The election of **Roy H. Niebling** as president of Sidney Blumenthal & Co., Inc., New York, N. Y., has been announced. Mr. Niebling succeeds William Heller who has resigned. Formerly vice-president of the company, Mr. Niebling has been acting as liaison between the mill and manufacturer, as well as resident manager of the company's plants in Rocky Mount and Wilson, N. C. Mr. Niebling is also a director and member of the executive committee.

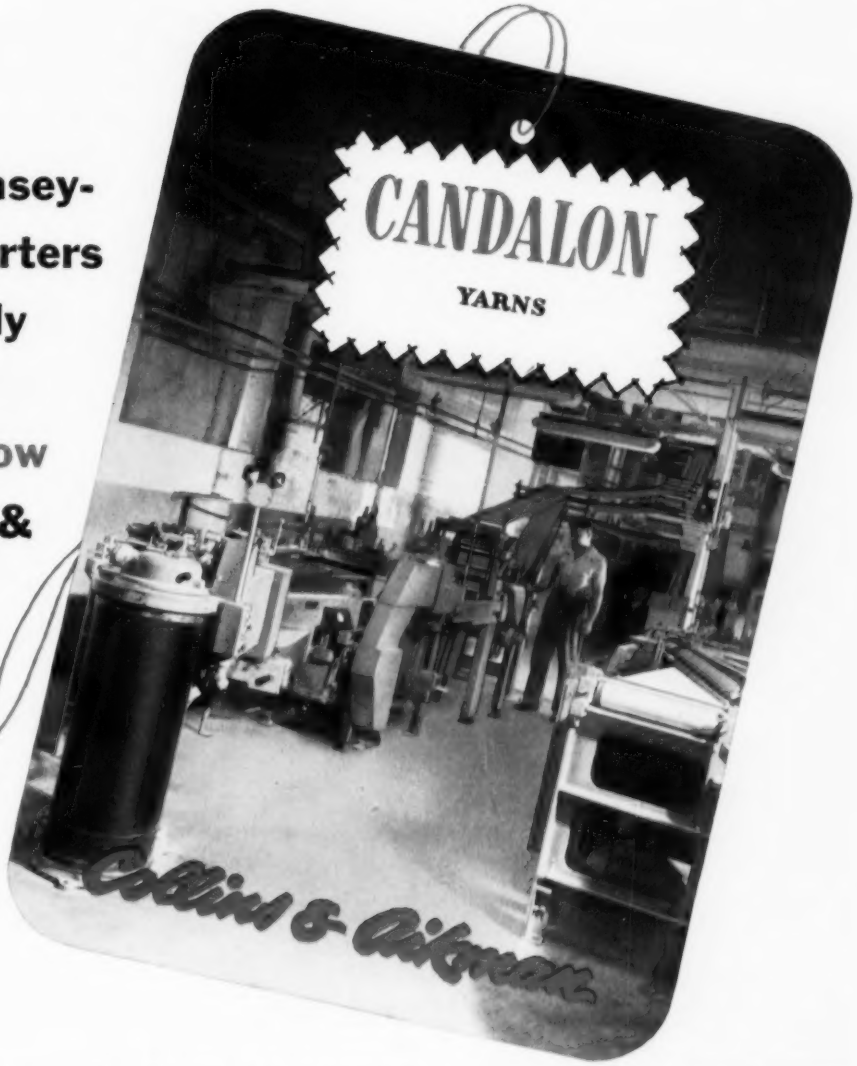
Mr. Niebling

New superintendent of the Dan River Mills plant at Wetumpka, Ala., is **J. Victor Nelson** who succeeds William H. Cook. Mr. Nelson was division superintendent and spinning supervisor at the main plant in Danville, Va.

Weldon Rogers has resigned as president of Ely & Walker Co., an affiliate of Burlington Industries, Greensboro, N. C. Mr. Rogers will be succeeded by **Preston W. Lewis** of St. Louis, Mo., now executive vice-president of Ely & Walker.

Louis D. De Loach has resigned as executive vice-president of Glendale Mills, Inc., Spartanburg, S. C., and

Warner & Swasey-Pacific® Converters successfully process Tow-dyed tow for Collins & Aikman



Collins & Aikman, pioneer producer of the well-known line of durable, quality Candalon Yarns, report they eliminate color variation in synthetics by first having the tow tow-dyed commercially. Then it's processed over their two Warner & Swasey-Pacific Converters which eliminates all stapling, opening, picking, carding and combing.

They tell us, "With the Warner & Swasey-Pacific Converters on the job, we are reaching our ultimate aim of improved quality at a lower price."

At Collins & Aikman's West Barrington, Rhode Island plant, conversion of tow-dyed tow is not limited to any one color. It's currently being processed in the following pastel shades: Sandalwood, beige, church red, linter green, spruce green, turquoise, gray and old gold. Production of hi-bulk tow-dyed tow never drops below 900 pounds per 8-hour shift. On other tows of Nylon, Dacron, Dynel and Viscose, output averages between 1100 and 1200 pounds per shift.

Why not use this new converter application in your own plant to increase both product quality and over-all profit?

WARNER & SWASEY-PACIFIC CONVERTER
With Heat-Stretch Unit

- Converts all types of synthetic tow to crimped sliver
- Cuts and accurately blends synthetics or natural fibers
- Eliminates blending, carding and gilling operations
- Heat-stretch unit gives *controlled shrinkage* of hi-bulk fibers — unit can be added to all existing converters
- High production — 100 to 130 pounds per hour

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121 11th Street, N. E., Atlanta 3, Ga.
Suburban Square Bldg., Ardmore (Philadelphia), Pa.
624 Pecan Avenue, Charlotte 1, N. C.

WARNER & SWASEY
Cleveland
PRECISION MACHINERY SINCE 1880
TEXTILE MACHINERY DIVISION

® Reg. U. S. Pat. Off.

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS ... WITH A WARNER & SWASEY

Personal NOTES ABOUT MEN YOU KNOW

no replacement is planned. Indian Head Mills and J. L. Stifel & Sons (which controls Glendale) are in merger agreement, and the Glendale plant will become a part of Indian Head's Pequot division in Spartanburg, under the direction of **R. Carl Dick,** vice-president.

At the Hanes Hosiery Mills Co., Winston-Salem, N. C., **Dr. Charles G. Gunn, Jr.,** has been appointed full-time medical director.

Now personnel director of the Kendall Co., Pelzer, S. C., plants is **Bob Hawkins,** formerly on the staff of the Mollohon plant at Newberry, S. C. Mr. Hawkins replaces **E. W. Mims** who resigned to accept a position with the state labor department. Succeeding Mr. Hawkins as assistant overseer of the card room at Newberry, S. C., is **Gerald Culclasure. Horace Reece** will temporarily assist **Hart Jordon,** Albertville plant manager, in the weaving department. **Charles Higgins** will serve as overseer in the lower Pelzer plant, and **A. B. Hair, III,** will be transferred from Newberry as assistant to **W. H. Taylor,** manager of the Pelzer plants.

For Effective Removal of
RESIDUAL CHLORINE

Tennessee's Liquid Sulfur Dioxide Is a Most Efficient and Economical Antichlor.

SO_2 accomplishes the following . .
Acidifies alkaline hypochlorite making it easier to wash out.
Reduces chlorine to the harmless valence Cl-!
Leaves fabric acid free.

TC TENNESSEE CORPORATION

LIQUID SULFUR DIOXIDE HIGHEST QUALITY SO_2

Available in:
- CYLINDERS
- TON DRUMS
- TANK TRUCKS
- TANK CARS

Tennessee's Liquid Sulfur Dioxide practically 100% pure, is also very effective as a reducing, bleaching and neutralizing agent, and pH control.

We would like to consult with you on the possibilities of Tennessee's Liquid Sulfur Dioxide in your processing.

TENNESSEE TC CORPORATION

617-29 Grant Building, Atlanta, Georgia

Frank E. Masland, Jr., president, C. H. Masland & Sons, Carlisle, Pa., is pictured here congratulating **Harry Harding,** (right), the oldest associate to attend the Masland annual

picnic recently at Hershey Park, Hershey, Pa. Mr. Harding is 72 years old. He has been with the carpet industry for more than a half century and is technical advisor for Wilton weaving at Masland.

Clarence Arthur Gaudette, at one time manager of the Pawtucket Valley Dye Works, West Warwick, R. I., is now chief chemist at Enterprise Dye Works, Woonsocket, R. I.

Thomas W. Hillyard has retired from his post as vice-president and a director of Munsingwear, Inc., Minneapolis, Minn., after serving with the firm for 26 years.

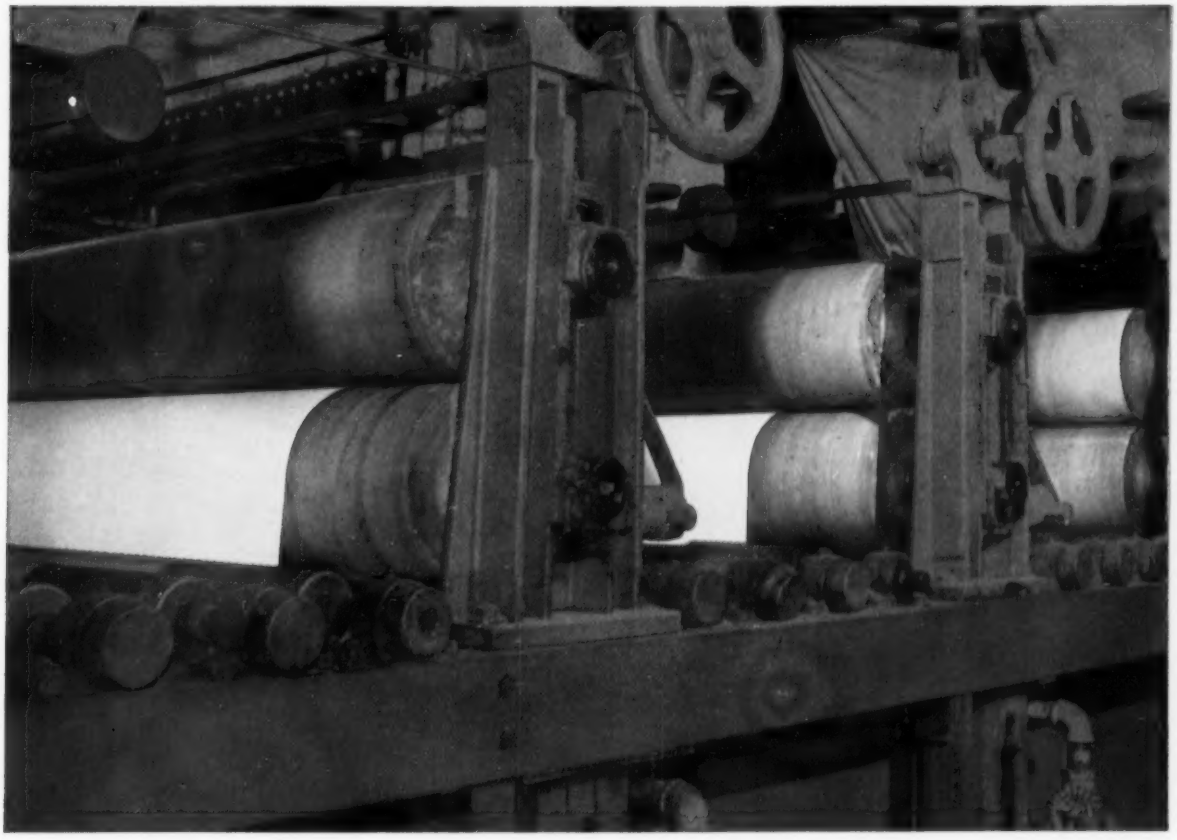
Newly elected president of Piedmont Plush Mills, Greenville, S. C., is **Sydney Bruce,** who succeeds the late Fred W. Symmes. Mr. Bruce will also continue as treasurer of the company. **H. T. Williams,** secretary, was named assistant treasurer.

At Quincy Dye Works, Woonsocket, R. I., the recently organized firm which took over the Woonsocket plant of Joan Plush Mills, **M. Cantor** is manager; **Henry Swick,** overseer of the grey room; **Sam Doughterty,** overseer of dyeing; and **Arthur Grover,** who was chief chemist at Enterprise Dye, is overseer of finishing.

Ernest Greer and **Mark A. Cooper, Jr.,** have been named assistant superintendents of the cotton mill at Ware Shoals division of the Riegel Textile Corp. Mr. Greer had been assistant superintendent—night of the cotton mill, and Mr. Cooper assistant super-

(Continued on page 56)

DAYCO FINISHING ROLLS



"Job Engineered" Rolls Last Longer—Cost Less On Your Dyeing Or Embossing Operation

Use Dayco "job engineering" to cut roll costs and eliminate unnecessary downtime on every one of your operations—whether it be a dye range or special finishing. The results are astounding. Mill after mill reports—"job engineered Dayco rolls have lasted 2 times . . . 3 times . . . 9 times longer, with better service and reduced downtime in changeovers."

One Dayco customer had trouble with a back-up roller on a calender used to emboss a leather grain in a vinyl coated fabric. Previous rollers lasted only 6-8 months working in the searing heat thrown off by a 300° oven used in the process. The Dayco engineer surveyed the operation—then specified a roll made with special compounds which would withstand extreme heat and pressure and not take a permanent set. This tailor-made roll has been in operation continuously for the last 18 months and shows no signs of deterioration.

Next time you need a finishing roll of any kind, have it "job engineered" first! Write or wire the Dayco Roll Engineer at The Dayton Rubber Company, Holfast Division, 1486 Lakewood Ave., Atlanta, Ga.

Dayton Rubber

THE DAYTON RUBBER CO., DAYTON 1, OHIO

West Coast Distributor, Tillicum Rubber Co., Lacey, Washington

THE DAYTON RUBBER CO., Holfast Div.
1486 Lakewood Avenue, Atlanta, Georgia

Gentlemen:
Please rush me "All the Money-Saving Facts about the New Dayco Finishing Roll."

Name_____

Position_____

Company_____

Address_____

City_____ **State**_____

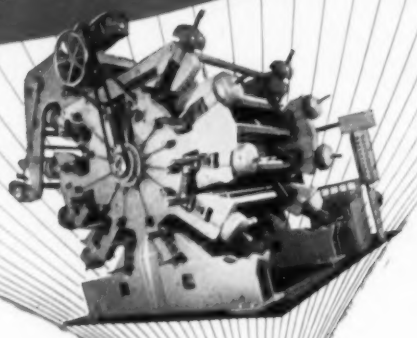
Ready now!

KLEINEWEFERS
Machines and Installations for
TEXTILE FINISHING

distributed and serviced by

BURLINGTON ENGINEERING SALES CO., INC.
GRAHAM, N. C.

OUTSTANDING CALENDERS AND PADDERS • «LAY ON ROLL» CHAINLESS MERCERIZERS
CONTINUOUS BLEACHING RANGES WITH NEW *Multiplex* WASHER
Autoprint ROLLER PRINTING MACHINES



JOH. **KLEINEWEFERS** SÖHNE KREFELD-WEST-GERMANY

represented by:
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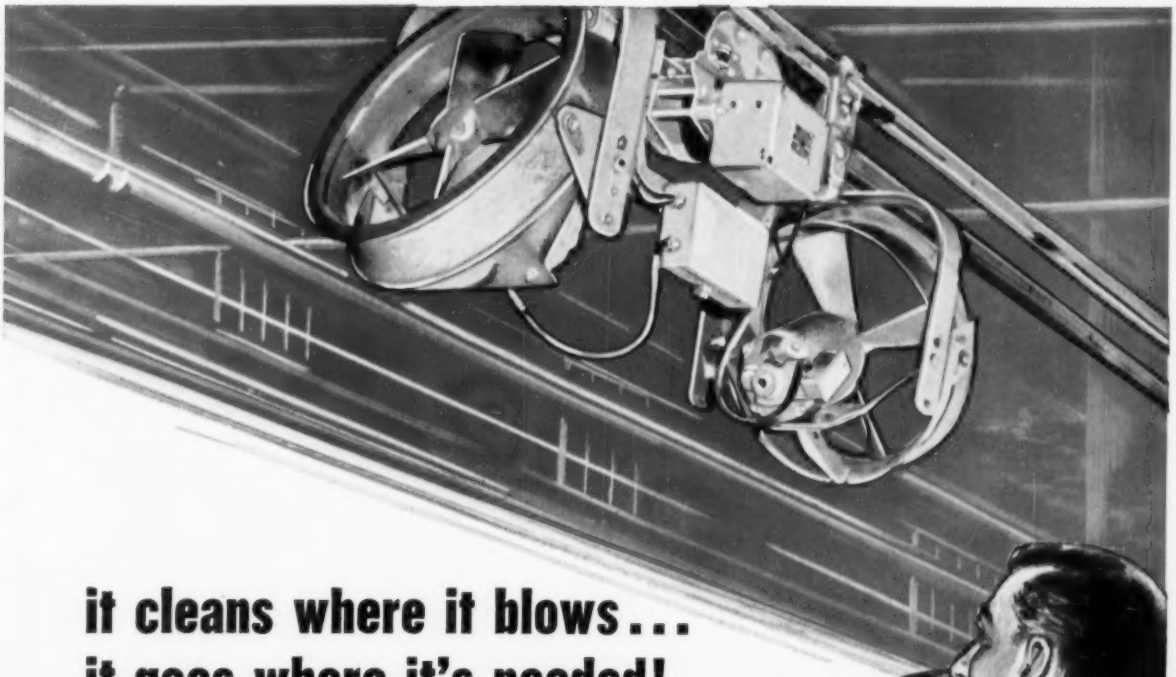
GRAHAM N.C. CABLE ADRESS BURENG GRAHAM. N.C.

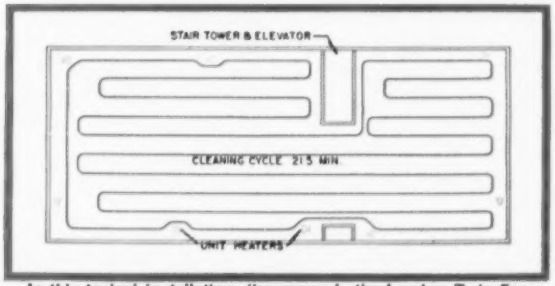


it cleans where it blows... it goes where it's needed!

More and more mills today keep their ceilings clean and free of lint with the Louden Automatic Twin-Fan Ceiling Cleaner which cleans *continuously* without disturbance to production or personnel below.

The twin fans, an exclusive Louden feature, sweep in *opposite directions* on both sides of the track at once, eliminating dead air pockets when traveling under beams, ducts and other ceiling obstructions. The twin fans are also independently adjustable, can be pointed in any direction, thus meeting the needs of your room. Automatic shut-off and turn-on for passage through areas where blowing is not needed is one of the features available.

If you have a ceiling cleaning or a materials handling problem of any type, let a Louden engineering representative tell you more, what it will cost, what you will save. Your inquiry will receive prompt attention.



In this typical installation diagrammed, the Louden Twin-Fan Cleaner travels along 2800 feet of Monorail track making complete circuit every 22 minutes.

THE LOUDEN MACHINERY COMPANY
7210 Court, Fairfield, Iowa
A Subsidiary of Mechanical Handling Systems Inc.

SINCE 1867...THE FIRST NAME IN MATERIALS HANDLING

Swift
102nd YEAR

To Serve Your Industry Better

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● *Swift sells Soap* and prompt, courteous and resourceful *service* —from a wide network of Swift offices and warehouses located all over the country.

Your Swift man draws on experience that covers over a *half a century* of mill progress in the practiced skills of dyeing, fulling and scouring. That's why there's a Swift's Soap or Detergent for most any textile finishing job. Swift will help provide sure, skilled and *experienced* service *wherever* fine fabrics need the *right* treatment.

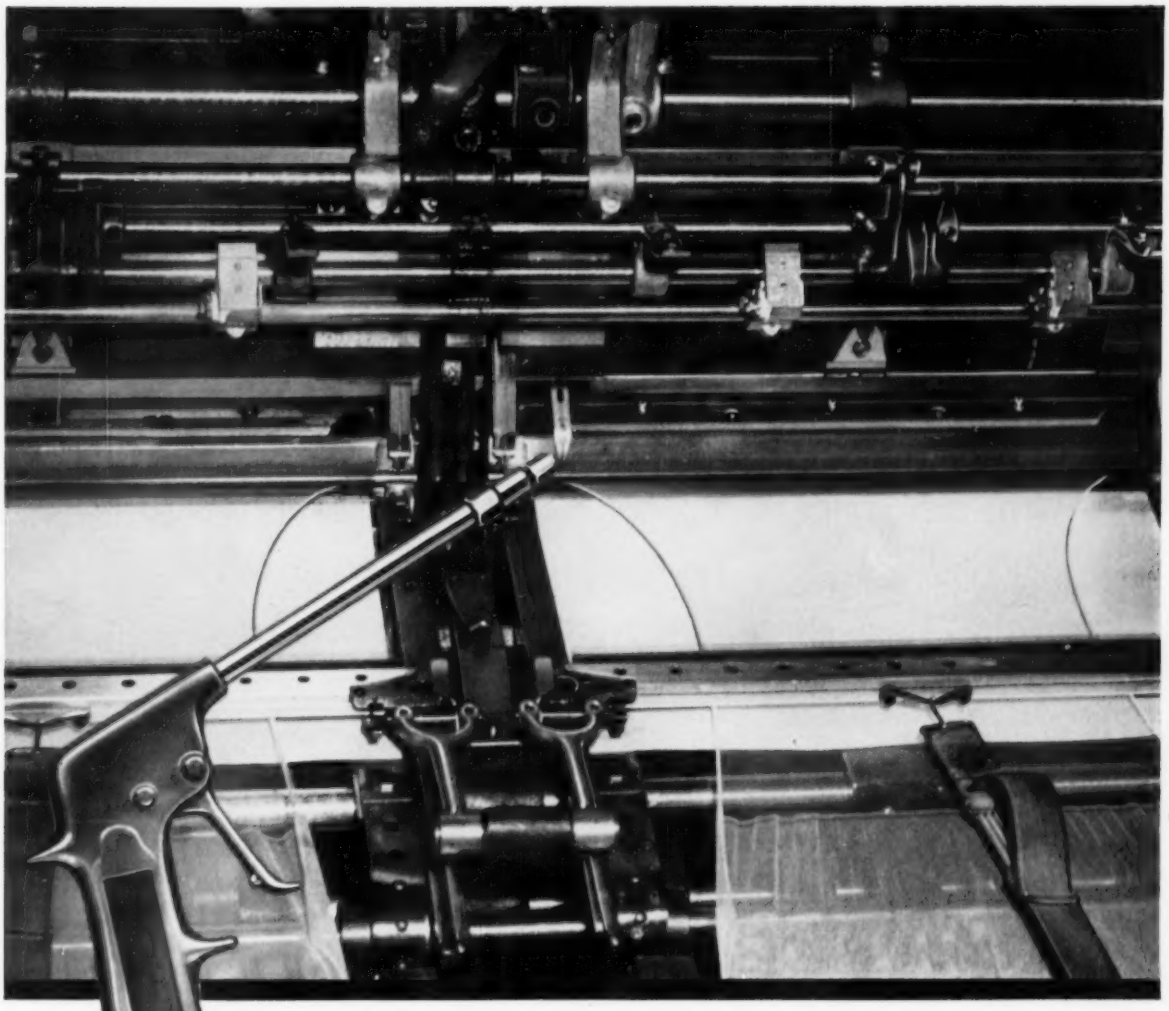
Ask your Swift man about the TITER TRIPLETS:

WHITE RIBBON (41°—42°C) A neutral high titer, all-purpose soap particularly recommended for high temperature sudsing. For wool, cotton or synthetic processing. Powder—92% anhydrous soap, Flakes—88% anhydrous soap.

T-25 (25°—28°C) Excellent for low titer fulling or for scouring fine or heavy worsteds. A neutral medium titer, red oil blended soap in flake form. Has 92% actual soap content.

VERTEX FLAKES (10°—12°C) Produced from high quality red oil. Quickly soluble in low temperature operations. Excellent for woolens. Provides good scouring at reduced steam costs. 94% actual soap content.

ONE TRIAL IS BETTER THAN A THOUSAND CLAIMS



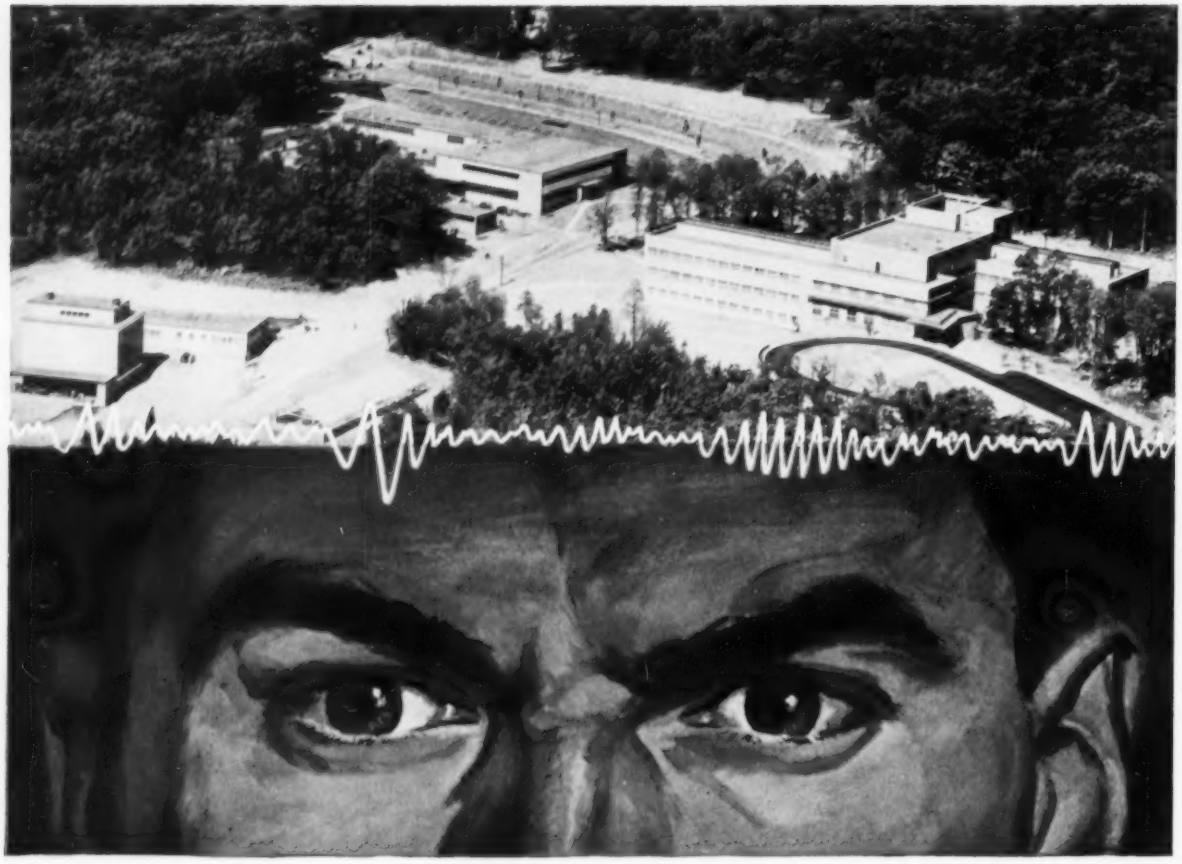
Keeps Needles Clean!

Keep rust and size deposits out of your knitting machines! Switch to Sinclair CRYSTOIL. This superior needle oil is specially formulated for knitting operations: It keeps needles free from rust, and not only resists encrustation, but *will actually remove size or crust build-up.* Fewer applications of oil are needed between sets. Moreover, the light color pays an extra bonus in finishing operations . . . scouring is minimized when CRYSTOIL has been used!

Look into the advantages of Sinclair CRYSTOIL or CRYSTOIL LIGHT (for the finer gauge machines). Call your local Sinclair Representative or write Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y. *There's no obligation.*

SINCLAIR

CRYSTOIL NEEDLE OILS



Here, creative minds will shape the future

Yes, here in the new Research Center of United States Rubber Company the probing minds of chemists and other scientists will find the ideal environment for conceiving new ideas...the finest facilities for bringing them into reality. Located on a 100-acre tract in suburban Wayne Township, New Jersey, the Center is a concrete symbol of the basic importance of Research in this company's past, present and future.

Significantly, at least 25 of U. S. Rubber's major product lines have been developed within the past twelve years.

As the Chemical Division of U. S. Rubber, Naugatuck Chemical continues to contribute a generous portion of new and improved products... such as its ready-to-use latex/resin compounds (Lotols®) for back-sizing pile or tufted fabrics and carpets.

Such developments stem not only from our research laboratories at Naugatuck, but also from Naugatuck's agricultural research facilities at Bethany, Connecticut, and the laboratories of our Canadian affiliates, Naugatuck Chemicals and Dominion Rubber Company, Ltd. Now, Naugatuck's research will be substantially augmented—and perhaps channeled in radically new directions—by the more fundamental research carried on at the new Research Center.

In the future, even more than in the past, look for the name Naugatuck to identify *the newest and the finest* products in their respective fields!

United States Rubber

Naugatuck Chemical Division, NAUGATUCK, CONNECTICUT

Rubber Chemicals • Synthetic Rubber • Plastics • Agricultural Chemicals • Reclaimed Rubber • Latices

BRANCHES: Akron • Boston • Gastonia, N. C. • Chicago • Los Angeles • Memphis • New York • Philadelphia • CANADA: Latex Div., Dominion Rubber Co., Ltd., Montreal • CABLE: Rubexport, N.Y.

No. 5 of a Series
of Improved Draper Repairs
and Mechanisms

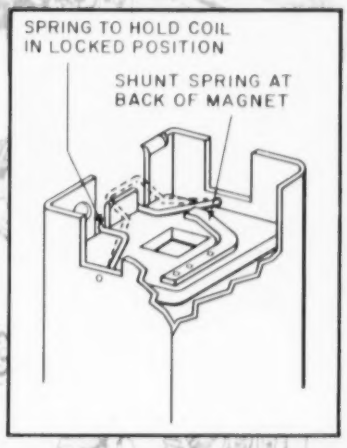
NEW #87 AC SHUNT MAGNET FOR THE K-A ELECTRICAL WARP STOP

The #87 AC Shunt Magnet has many improved features and replaces the #83 AC Shunt Magnet. The coil for the #87 AC Magnet is wound on a solid one-piece Nylon bobbin. The shunt contact is firmly attached to it. This complete unit is held securely in position in the case by a locking spring. Uniform settings can be maintained, and replacing of coil is simplified.

TO ASSEMBLE, insert coil in case with contact point of shunt at back of case. Put short end of the Lock Spring in opening at back of case, and then snap it into other opening. This seats and holds coil in place and allows loop of the spring to fall over the ear in side of case. Put armature and plunger assembly in position and slide cover on over Lock Spring.

When repairs are needed, we recommend replacing the #83 AC Shunt Magnet with the #87 AC Shunt Magnet. However, this new coil can be used as a replacement in #83 Magnets by bending the lips on either side of case to hold coil in position.

Coil Replacement for #87 AC Shunt Magnet



Special materials, superior for this type of electrical unit, are used throughout in the manufacture of the #87 AC Shunt Magnet.

DRAPER
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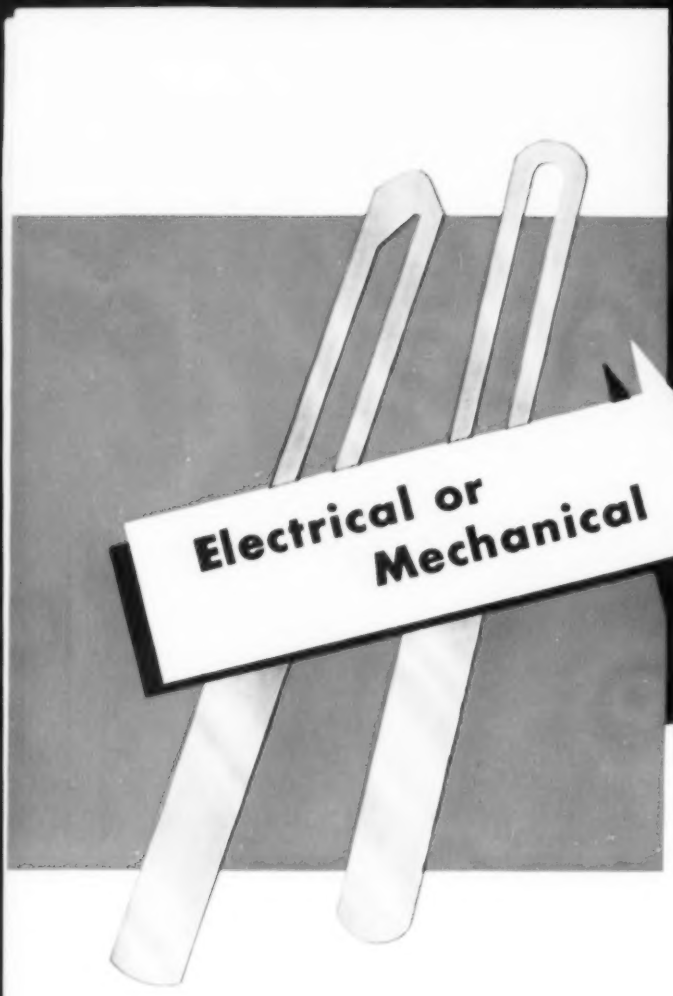
Hopedale, Mass.

Atlanta, Ga. Greensboro, N. C. Spartanburg, S. C.



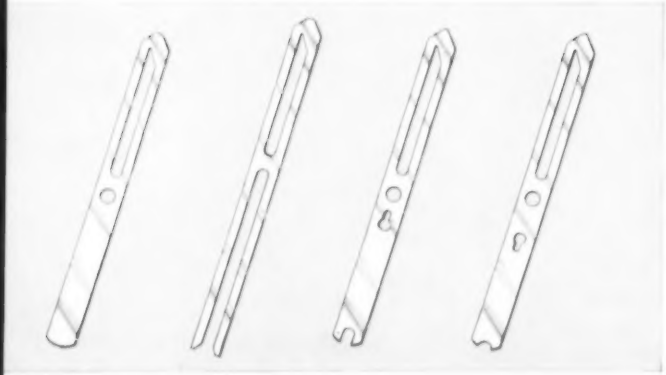
DRAPER
DROP WIRES
MEET EVERY MILL REQUIREMENT

Long experience in satisfying the most exacting demands of delicate weaving enables Draper Corporation to produce Drop Wires of unexcelled finish. K-A Drop Wires are available in a wide variety of styles and weights, ranging from 5 grains to over 150 grains in weight and from .004″ to .045″ in thickness.

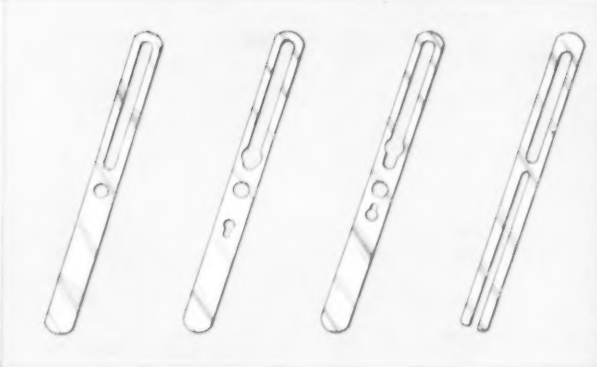
Drop Wires of carbon steel with copper or galvanized finish, or stainless steel Drop Wires can be furnished upon request.

For Drop Wires that offer you maximum service and protection, specify . . . Draper K-A.

ELECTRICAL



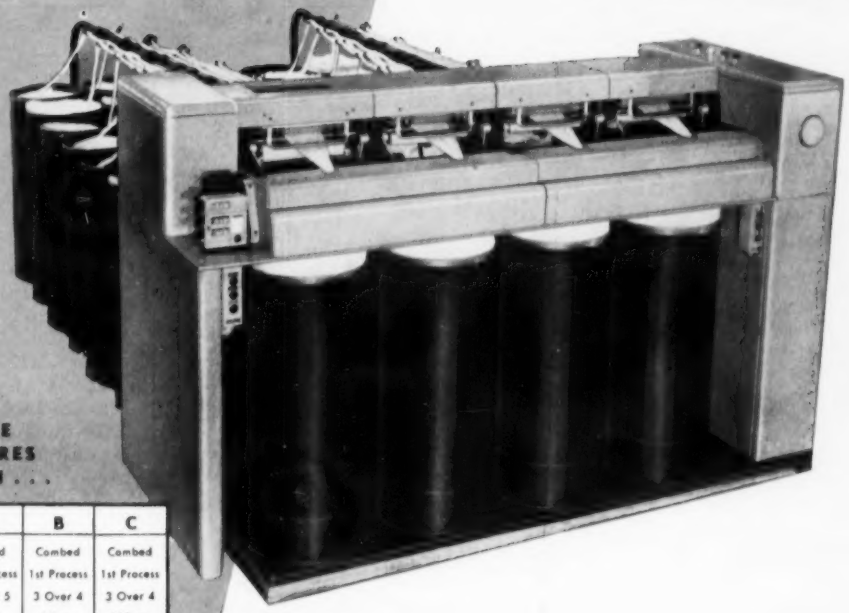
MECHANICAL



DRAPER CORPORATION

K-A Electrical Warp Stop Division, Pawtucket, Rhode Island

Production- KEY TO PROFITABLE OPERATION



COMPARE THESE PRODUCTION FIGURES WITH YOUR OWN . . .

Mill	A	A	B	C
Stock	Carded	Carded	Combed	Combed
Process	1st Process	2nd Process	1st Process	1st Process
Model Versamatic	4 Over 5	4 Over 5	3 Over 4	3 Over 4
Sliver Fed	52.5 gr.	54 gr.	55 gr.	120 gr.
Ends Up	8	8	8	4
Speed	264 ft./min.	264 ft./min.	260 ft./min.	216 ft./min.
Sliver Delivered	54 gr.	56 gr.	55 gr.	60 gr.
Tester	Saco-Lowell	Saco-Lowell	Saco-Lowell	Brush
Variation	18%—19%	18%—19%	10%—13%	14%—16%
Efficiency	92%—95%	92%—95%		
Deliveries	16	16	60	32
Deliveries/Operator	32	32	30	32
Can Size—Back	15" x 42"	15" x 42"	15" x 36"	
Can Size—Front	15" x 42"	15" x 42"	15" x 36"	14" x 36"
Yards/Can	3800 yds.	3875 yds.	3300 yds.	2850 yds.
Pounds/Can	29.3 lbs.	31.0 lbs.	25.9 lbs.	24.4 lbs.
Draft	7.77	7.71	8.03	8.03
Pounds/Man Hour	1250 lbs.	1270 lbs.	1105 lbs.	1070 lbs.

For complete information and a demonstration — call your nearest Saco-Lowell office.

Versamatic DRAWING FRAMES *by* SACO-LOWELL

GIVE HIGHEST PRODUCTION OF QUALITY SLIVER BY EVERY STANDARD — PER DELIVERY — PER MAN HOUR — PER HORSEPOWER — PER SQUARE FOOT OF FLOOR SPACE.

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS

Shops at BIDDEFORD & SACO, MAINE; SANFORD, N.C.; EASLEY, S.C. Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA

SOUTHERN STATES CD-2 CARD DRIVE COMBINES INTO ONE UNIT ALL OF THE FEATURES WANTED FOR COTTON CARDS

Here is why we honestly believe the Southern States CD-2 Card Drive is the safest, simplest, most efficient individual drive on the market today:

Finger-tip control. No changes in operating procedure. Unit is controlled by simple clutch lever in both starting and hand stripping.

Full speed in seconds. A 1½ hp high torque card motor brings card into full operation, seconds after clutch is engaged.

Safety engineered. All belts and moving parts are covered. Starting and idling is accomplished by simple clutch lever.

Rugged construction. The entire unit is built for heavy-duty service: steel main stand; cast iron jackshaft bracket and main pulley; cast aluminum cover. Ball bearing throughout.

Easy installation. Fits any cotton card. Minimum number of holes to drill in frame. Drive pulley, collar and clutch are preassembled and slip on to shaft using existing keyway.

Get the facts from your Southern States representative or write for Bulletin 301-a.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 46)

intendent of the dyeing and finishing department at the Trion division. * * * **Thomas D. Woods** has been appointed to the quality control staff at the Trion division. Mr. Woods was formerly assistant production manager with Pepperell Manufacturing Co., Lindale, Ga.

Andrew E. Grieve is the new superintendent of Security Mills, Newton, Mass.

Two members have been added to the board of directors of the South Carolina Textile Manufacturers Assn. They are **Charles D. Green** of Spartanburg and **W. F. Robertson** of Ware Shoals. Mr. Green is a vice-president of Reeves Brothers, Inc., in charge of southern subsidiaries which include textile manufacturing and finishing plants in Greenville and Spartanburg counties, and at Bishopville. Mr. Robertson is vice-president in charge of production of the Riegel Textile Corp.

New president of Springfield (Tenn.) Woolen Mills Co. is **Hugh G. Chatham,** president of Chatham Manufacturing Co., Elkin, N. C., purchaser of the Springfield firm. **Sam Neaves,** who was transferred from the Elkin plant to direct operations at Springfield, was elected vice-president. **William Butler** of Chatham is controller. **Harry Elam,** Springfield employee, was elected secretary-treasurer.

Albert Smith, formerly with the Greenwich Printing and Dyeing Co., East Greenwich, R. I., is now overseer of printing at Stafford Printers, Stafford Springs, Conn.

J. P. Stevens & Co., Inc., has announced the appointment of **Dr. Paul B. Stam** as director of research, a newly created post. Dr. Stam, for the present, will make his headquarters in Greensboro, N. C., and will be responsible for research (with the exception of market research which will continue to be headed up in New York, and machinery research and development which will continue under the direction of **W. H. Trammell, Jr.,** of Greenville, S. C.). Dr. Stam was formerly with Burlington Industries in Greensboro, N. C. * * * **Keith B. Chisholm** of Sydney, Australia, has

joined the staff and will be located with the wool section of the commodity division in North Andover, Mass. * * * **P. Jennings White** has been promoted from superintendent of the Greer plant to superintendent of the Victor plant, to succeed J. W. McKain, resigned. At the Greer plant **W. M. Poag** has been elevated from general overseer of carding and spinning to superintendent, to succeed Mr. White. **Edward H. Stall** has been promoted from general overseer of weaving to general overseer of carding and spinning, and **James F. Paris** has been elevated from overseer of weaving second shift, to general overseer of weaving.

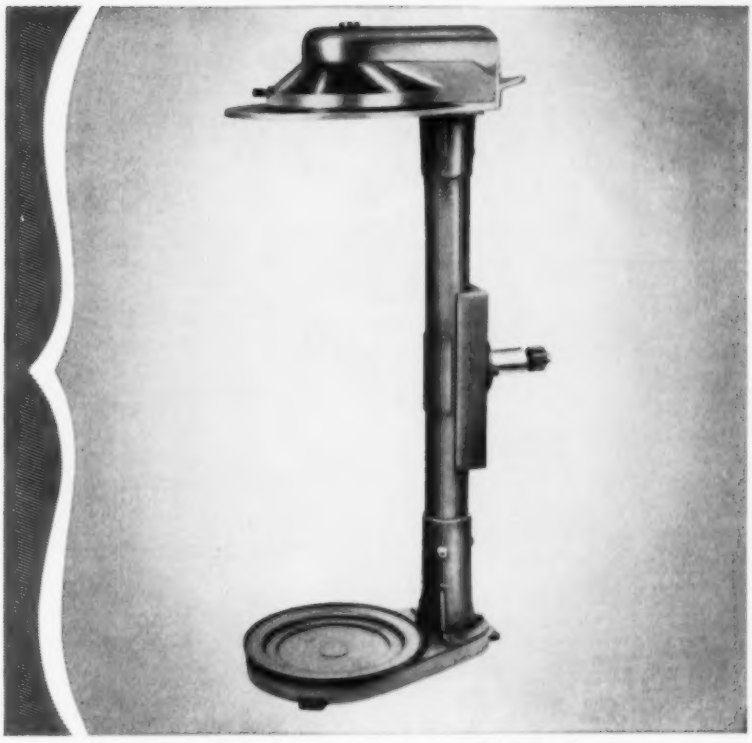
Henry Korn, executive vice-president in charge of sales for Claremont Knitting Mills, Inc., has been appointed design and sales consultant for the newly formed Temi Knitwear, Inc. Mr. Korn, who has been in the knit goods business for over 25 years, will work both in the plant and in the field with salesmen.

Textured Yarn Co., Inc., Philadelphia, Pa., has announced the appointment of **Charles H. Weiner** to the newly created position—supervisor of foreign operations for Tycora yarns—in addition to his present duties as general merchandise manager. The firm is completing contract arrangements for the production and distribution of yarns under the Tycora name in Australia, Canada, Denmark, England, and France. An international program of merchandising will be launched from the New York offices where Mr. Weiner makes his headquarters.

Newly named assistant to the manager of mills of **Kimberly-Clark Corp.,** Neenah, Wis., is **H. T. Rindal** who has been manager of the Berkeley Mills, Inc., Balfour, N. C., a subsidiary of Kimberly-Clark. The transfer will be completed by early fall. Successor to Mr. Rindal will be **R. V. Thomas,** at present manpower head in the industrial relations department at Neenah.

E. W. Haggerty, controller-auditor, Pendleton (Ore.) Woolen Mills, has been elected president of the Portland Control of the Controllers Institute of America. Newly elected directors of Institute local controls in their respective areas are: **Carl T. Buckanan,** assistant secretary and treasurer, Texas Textile Mills, Inc., Dallas; **Charles H. Burns,** corporate con-

(Continued on page 212)



SOUTHERN STATES' NEW COILER LINE HAS ALL ENGINEERING AND DESIGN FEATURES WANTED BY MILL MEN

Name the features you desire most and you will find them on Southern States' vastly improved coilers. To provide mills with a truly premium-quality coiler, every engineering and design feature wanted by mill men has been included.

Here are some of them: available for all can sizes . . . ball bearing throughout—head, shaft, and can table . . . cut tooth gears throughout . . . head and base may be rotated . . . strong tubular steel stand . . . precision-ground calender rolls . . . self-aligning pillow blocks on upright and calender roll shafts . . . fully adjustable can table . . . quickly detached coil spring roll-loading device. Others are fully described in our technical bulletin.

Southern States Coilers are designed for direct attachment to any make of card, left or right hand. Installation is rapid and economical.

Your mill can profit by this coiler that is quality-built throughout to operate at peak performance, with minimum maintenance, for years.

Get the facts from your Southern States representative or write direct to us for Technical Bulletin 203-a.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

For further information use Handy Return Card, Page 197

Worried ?

Trying to keep track of new products . . . . . ?

Looking for new facts on machinery, equipment, supplies and services . . . ?

Hunting new sources of supply . . . ?

SIMMER DOWN, HELP'S ON THE WAY! THE NEW ISSUE OF . . .

Textile Industries'

ANNUAL PRODUCT PARADE AND BUYER'S GUIDE

. . . . . will be on your desk by Mid-November. This practical, down-to-earth compilation of reference information will help you find what you want easily and quickly.

No fuss, no bother, just pick out the subjects that interest you and, bingo, there's the whole story all neatly put together so that you can find the facts you want all in one place. Look at these headings and see for yourself how logically the information is arranged:

Section 1—Opening, Blending, Picking, Carding, Combing, Drawing, Roving.

Section 2—Spinning, Twisting, Winding, Spooling, Warping, Throwing.

Section 3—Slashing, Weaving, Cloth Room, Tufting.

Section 4—Knitting (full-fashioned, circular, tricot, etc., boarding, finishing.)

Section 5—Wet Processing

Section 6—Fibers and Yarns

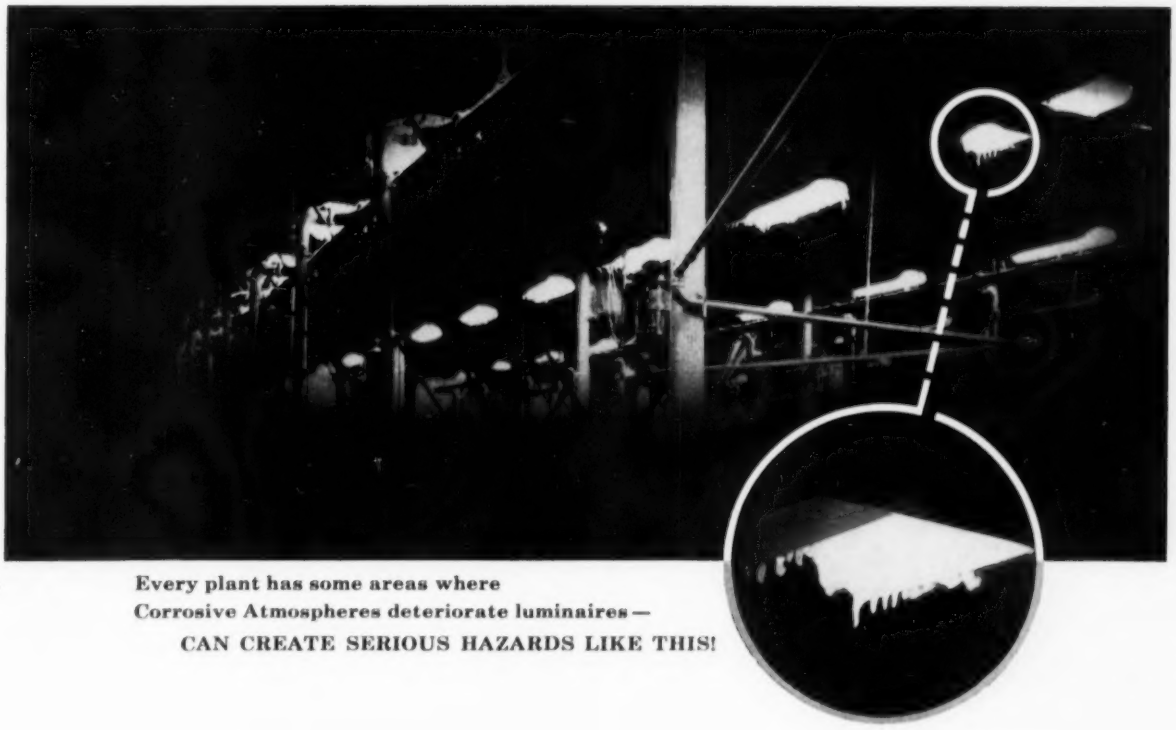
Section 7—Laboratory Testing, Research

Section 8—Management

Section 9—General Plant Operation, Construction & Maintenance

Section 10—Materials Handling

In each section, there's a Product Parade, a Buyer's Guide, a listing of Product Literature, and a wealth of informative ads, with everything arranged to save you time and effort. Watch for further announcements on this important issue with the *exclusive* reader service features. If your subscription has lapsed, renew it now and be sure you get your own copy of the *Annual Product Parade and Buyer's Guide* plus 24 regular issues—all for the low, low rate of $3.00.



Every plant has some areas where
Corrosive Atmospheres deteriorate luminaires—
CAN CREATE SERIOUS HAZARDS LIKE THIS!

LUMINAIRE REPLACEMENT COSTS

In plants where corrosive atmospheres are unavoidable

NOW CUT AS MUCH AS 75%

NEW, CORROSION RESISTANT LUMINAIRES, by Westinghouse, now made with stainless steel — brass and porcelain enamel outlast conventional luminaires 3, 4 and 5 times!

Contaminating vapors, corrosive steam, excessive moisture — like those occuring in *virtually every* processing operation — can *ravage* the materials used in making most, common, industrial luminaires!

This *frequently* causes *exhorbitant* luminaire-replacement costs! — the constant threat of short-circuits! — the costliness of corroded substance dripping into product-in-process! — *even the danger of luminaires dropping into machinery — onto workers themselves!*

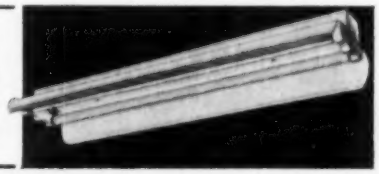
As a result, more and more companies have been installing Westinghouse Corrosion Resistant Luminaires — therby avoiding these unnecessary hazards! — and *reducing luminaire-replacement costs as much as 75%.*

These Westinghouse Corrosion Resistant Luminaires are made with end-plates of nickel-plated brass, stainless-steel hardware, porcelain-enameled channels and reflectors, heavy-duty brass-enclosed lamp-holders — with *all* components as *corrosion-free* as modern metals permit!

Your near-by Westinghouse Lighting Specialist is *thoroughly prepared* to survey *your* plant operations! — to recommend, "*squarely,*" *whether or not your company would benefit* from Corrosion Resistant Luminaires! *Call* him, or your Westinghouse Distributor, *today!* or write: Westinghouse Electric Corporation, Lighting Division, Edgewater Park, Cleveland, Ohio. It *may* save you *appreciable* amounts of money!

J-04424

NEW!
CORROSION RESISTANT LUMINAIRES



YOU CAN BE SURE...IF IT'S

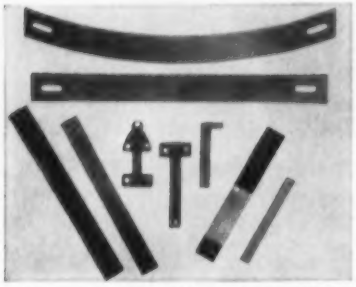
Westinghouse®

GARLAND MFG. 91st YEAR

Garland Manufacturing Company, Saco, Maine has been manufacturing rawhide products for the textile industry since 1866. H. P. Garland, founder of the company, was the author of a text on the water buffalo and rawhide applications in the textile industry which is used as a standard reference source on the subject. The company buys choice water buffalo hides from Java, Burma and other Far East sources. These hides are cured for the Garland concern in England. The rawhide is further processed in Maine and famous Garland Pickers and other rawhide products are manufactured for textile users.

NEW LINE OF LEATHER PRODUCTS

A need of the mills for superior leather products of uniform quality has prompted Garland Mfg. Company to produce check straps and by-products, such as picker checks, hold up straps, etc., of the finest imported hair-on leather as well as binder leather from the best oak tanned leather available.

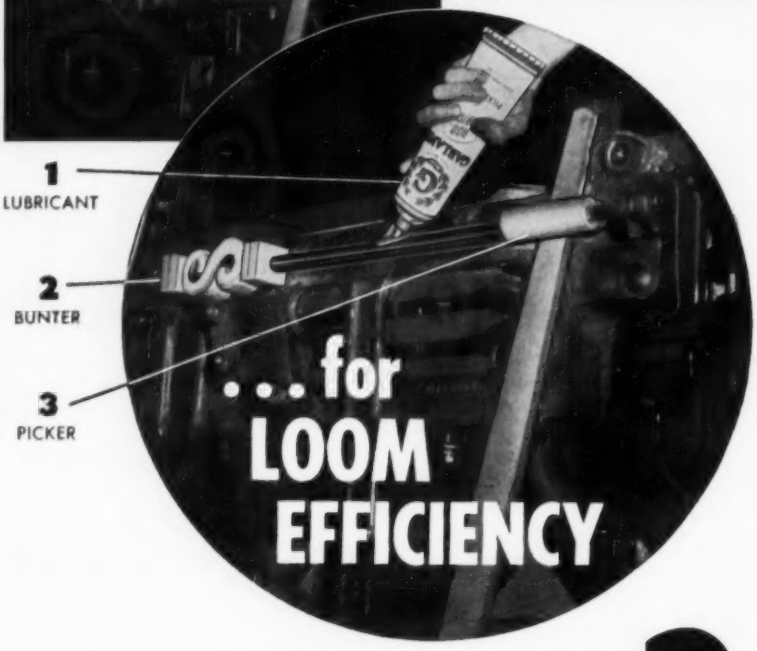


In many cases, it has been found that these superior products, because of Garland's production methods, are selling at prices lower than inferior grades.

REINFORCED LOOM PICKER

Research based on a survey of mills has enabled the Garland Manufacturing Company to produce a picker that far out-lives previous types. The new loom picker has a reinforced stick hole that corrects a basic weak point of pickers generally . . . provides much longer service. Likewise the spindle hole has been improved and strengthened by locked-in flanges at both ends. The picker head has been strengthened by a heavier outside layer of rawhide, eliminating the need for a rivet through the picker head. Mills using the reinforced loom picker have reported much longer life of the picker with resultant savings.

ALL 3 GO TOGETHER



GO TO GARLAND FOR ALL 3

It's a more efficient loom with Garland's rod lubricant, sponge leather bunter and rawhide picker! Here's why:

1. ***GARLAND ROD LUBRICANT AND APPLICATOR*** – Overcomes disadvantages of old-fashioned methods. Lubricant's tacky substance clings to rod. Eliminates oil drip, regular grease pile-up, overheating, excessive friction, frequent loom stoppage. Applicator fits all size rods. Squeeze of tube spreads uniform thin film of grease.

2. ***GARLAND SPONGE LEATHER BUNTER*** – Exclusive genuine sponge leather "takes" shock better. Long life assures economical operation. "Proved" through wide industry use. Now available in unlimited quantities for the first time.

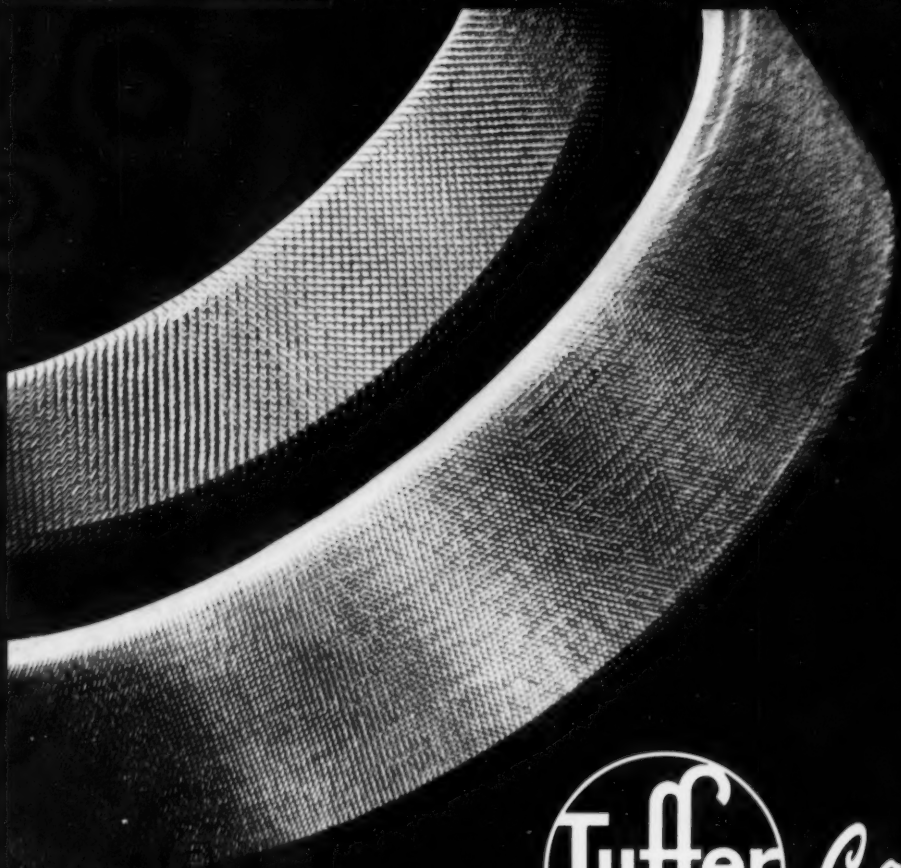
3. ***GARLAND GENUINE RAWHIDE LOOM PICKER*** – Reinforced stick hole for longer service. Heavier, stronger picker head . . . pressure molded . . . improved spindle hole . . . water Buffalo hide — toughest material available, anywhere.

WRITE TODAY FOR FREE INFORMATION ABOUT GARLAND PRODUCTS FOR GREATER LOOM EFFICIENCY

Garland MANUFACTURING CO.

Manufacturers of RAWHIDE LOOM PICKERS • SPONGE LEATHER BUNTERS • RAWHIDE HAMMERS AND MALLETS

54 WATER STREET • SACO • MAINE



Tuffer TRADE MARK *Card Clothing*

Hundreds of mills . . . year after year . . . get the utmost in production with **TUFFER** *on their cards.*

Tuffer always meets the requirements of those who want the best

Manufacturers of Card Clothing since 1866

Tuffer **HOWARD BROS.** TI

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga., and Gastonia, N. C.

Direct Representation in Canada

TUFFER PRODUCTS Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing and Brushes • Top Flats re-covered and extra sets loaned at all Plants • Lickerins rewired at Southern Plants • Hand Stripping Cards

This man helps move 175 carloads of caustic at a time

(He's a deck officer on the Marine Dow-Chem)

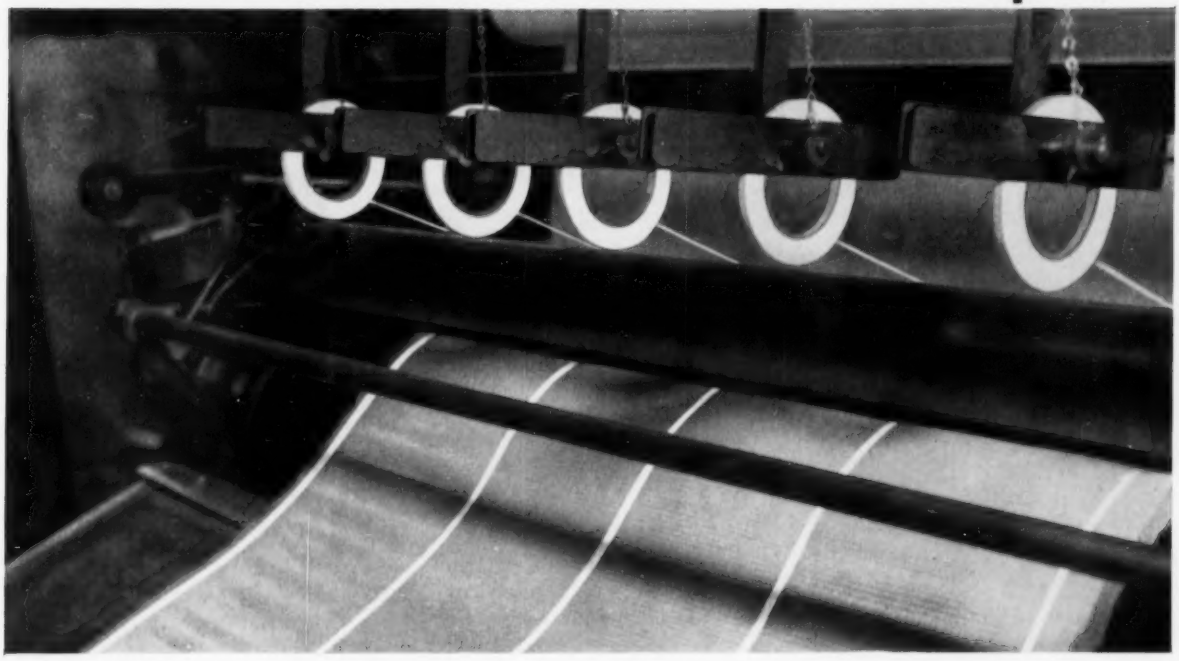
After a few terse commands from the bridge, the 18,000-ton *Marine Dow-Chem* glides silently into the night. With her cargo of vital chemicals the *Dow-Chem* plies her way to key Dow terminals. In her storage tanks there is enough caustic soda to fill 175 tank cars.

Typical of the foresighted Dow attitude of solving a problem before it arises, the *Dow-Chem* was commissioned in 1954 with an eye to the future needs of industry. Today, this specially equipped ship is an important part of our vast distribution system.

As demand increases, Dow will continue to lead the way in developing new methods to deliver caustic soda to your doorstep in any form or quantity. THE DOW CHEMICAL COMPANY, Midland, Mich., Dept. AL 600F-2.

YOU CAN DEPEND ON DOW

PERMANENT PLEATS—with tape!



Cotton cloth is permanently pleated more quickly, more economically than ever before. A continuous length of "SCOTCH" Brand Paper Tape does the job. Tape, applied direct to pleating tissue in several positions, effectively holds the pleats through the entire curing circle. Send for FREE manual illustrating this and 60 *other* cost-cutting applications – with tape. Write 3M Company, Department OU-107, St. Paul 6, Minn.

STARTING cloth on high-speed winder shells is a cleaner, neater job with "SCOTCH" Brand Double-Coated Tape No. 400. Adhesive on one side of tape sticks to shell. Adhesive on other side holds cloth without soiling or damage.

SEALING boxes and packaged textile goods takes a lot less time with a box sealer and "SCOTCH" Brand Cellophane Tape No. 600. Sealer quickly and cleanly applies a short strip of tape around side and bottom of telescope boxes. Easy!

IDENTIFYING contents of sliver and roving cans saves searching. "SCOTCH" Brand Cellophane Tape No. 600 or Acetate Fibre Tape No. 700 is supplied in 12 colors for quick color-coding. Tape sticks securely in place, yet removes easily when desired.

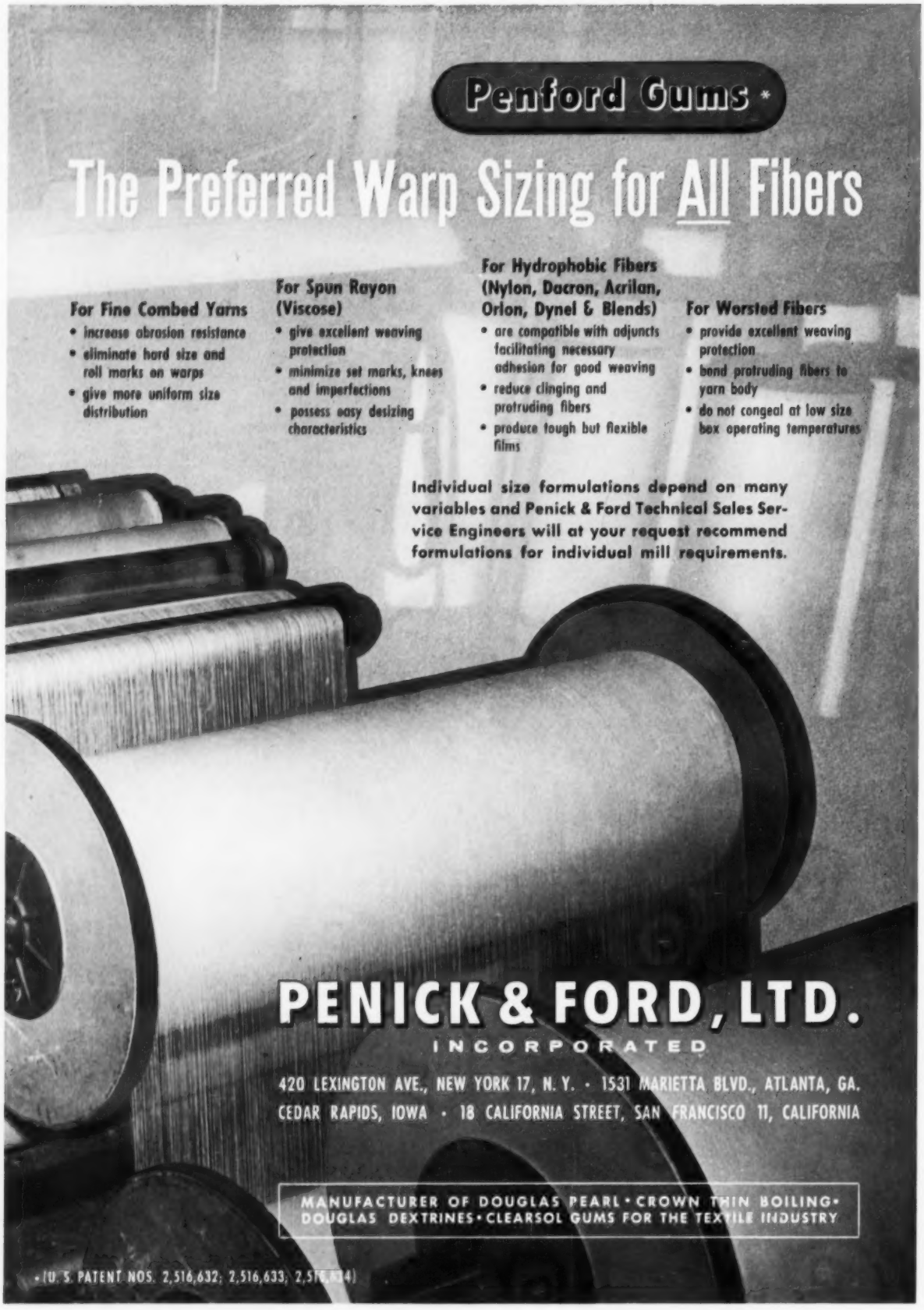
REG. U.S. PAT. OFF.

SCOTCH BRAND Pressure-Sensitive Tapes

For the Textile and Apparel Industries

PRODUCT OF 3M COMPANY RESEARCH

The term "SCOTCH" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul 6, Minn. Export Sales Office: 99 Park Ave., New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario. © 3M Co. 1957.


Penford Gums *
The Preferred Warp Sizing for All Fibers
For Fine Combed Yarns
• increase abrasion resistance
• eliminate hard size and roll marks on warps
• give more uniform size distribution
For Spun Rayon (Viscose)
• give excellent weaving protection
• minimize set marks, knees and imperfections
• possess easy desizing characteristics
For Hydrophobic Fibers (Nylon, Dacron, Acrilan, Orlon, Dynel & Blends)
• are compatible with adjuncts facilitating necessary adhesion for good weaving
• reduce clinging and protruding fibers
• produce tough but flexible films
For Worsted Fibers
• provide excellent weaving protection
• bond protruding fibers to yarn body
• do not congeal at low size box operating temperatures
Individual size formulations depend on many variables and Penick & Ford Technical Sales Service Engineers will at your request recommend formulations for individual mill requirements.
PENICK & FORD, LTD.
INCORPORATED
420 LEXINGTON AVE., NEW YORK 17, N. Y. · 1531 MARIETTA BLVD., ATLANTA, GA.
CEDAR RAPIDS, IOWA · 18 CALIFORNIA STREET, SAN FRANCISCO 11, CALIFORNIA
MANUFACTURER OF DOUGLAS PEARL • CROWN THIN BOILING • DOUGLAS DEXTRINES • CLEARSOL GUMS FOR THE TEXTILE INDUSTRY
• (U. S. PATENT NOS. 2,516,632; 2,516,633; 2,516,634)

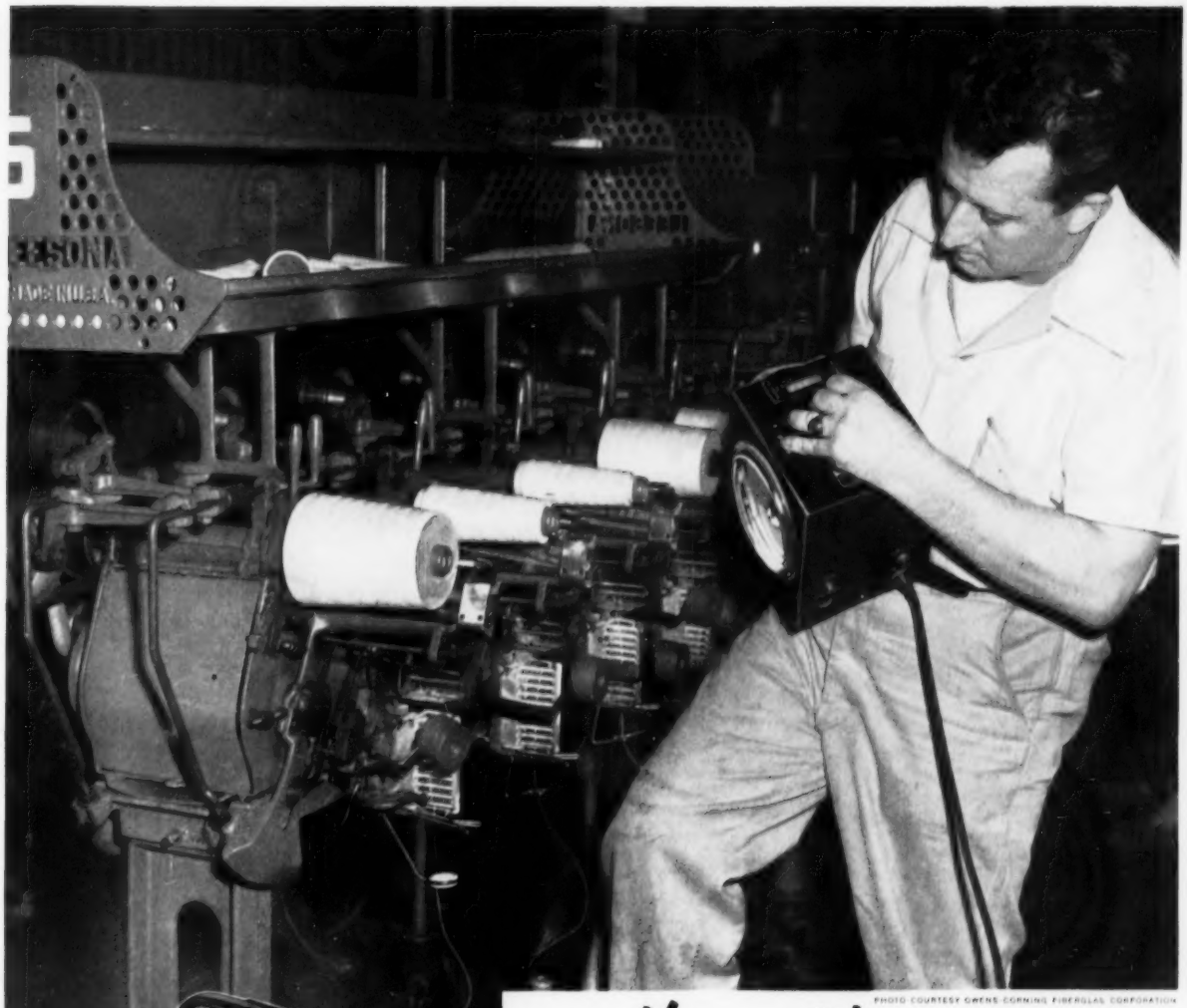


PHOTO COURTESY OWENS-CORNING FIBERGLAS CORPORATION

G-R Type 631-BL
STROBOTAC **$160**

Short-duration, stroboscopic light flashes are simply aimed at the moving object under study . . . one knob controls the flashing rate . . . when the object appears to be stopped, speed is read on instrument's calibrated scale to an accuracy of 1%. Range: 60 to 14,400 rpm direct reading. Will "stop" motion to 100,000 rpm. Self-contained . . . lightweight . . . operates from any 115v-60c line.

a Yarn with a New Twist

Unlike some of the yarns you've heard spun, this one is based on FACT: You can save money and make a better product when you check production with a Strobotac.

FACT: Spindles and travelers "stop" or operate in apparent slow motion while you study their behavior at full speed and normal yarn tension. Your operators can see the exact adjustment required for best results.

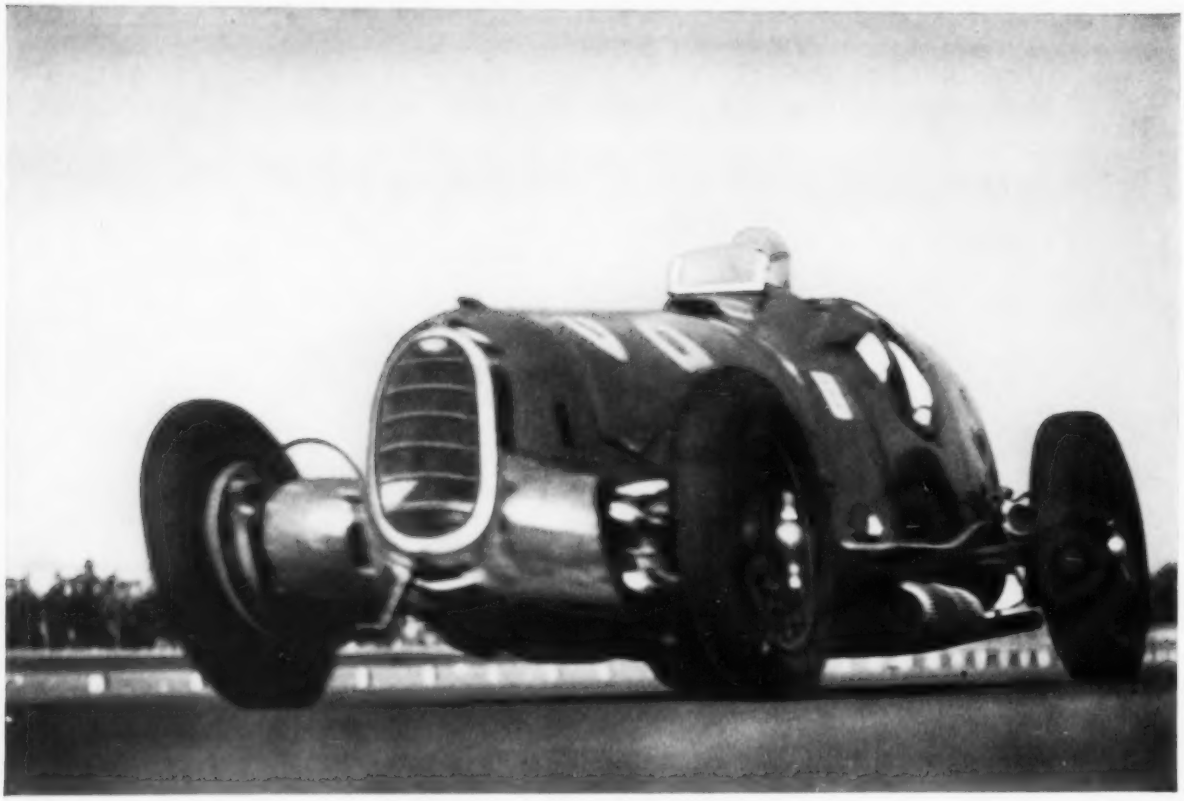
FACT: On any machine in your mill you can accurately determine speeds which are difficult, dangerous, or even impossible to measure with a hand tachometer.

Write for the STROBOSCOPE Bulletin

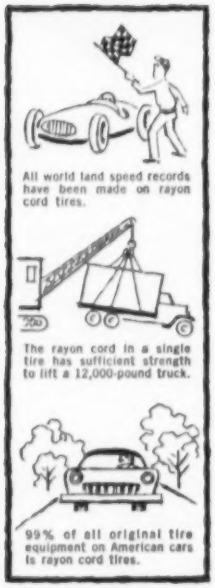
STROBOTAC®

manufactured exclusively by

GENERAL RADIO Company 275 Massachusetts Ave., Cambridge 39, Mass.



More Miles per Dollar... More Safety per Dollar... — *thanks to Rayon Tire Cord!*


All world land speed records have been made on rayon cord tires.
The rayon cord in a single tire has sufficient strength to lift a 12,000-pound truck.
99% of all original tire equipment on American cars is rayon cord tires.

Rayon, superseding cotton as tire cord, is largely responsible for the increasing endurance of our automobile and truck tires. Tire manufacturers now foresee tires which will last the normal life of a car.

Racing drivers, whose lives depend on the durability of their equipment, rely on rayon tires. Racing speeds generate great heat, and rayon grows stronger as it becomes hotter. To all drivers this is an important safety factor in summer.

During the last five years rayon manufacturers have added 45% to the tensile strength and 60% to the flex-life of rayon. This has substantially increased the durability, fatigue resistance, and safety of tires made with rayon cords.

Rayon is less expensive than any other man-made fiber suitable for tire cord. Unlike some man-made fibers, rayon takes no set when standing, making "flats" on otherwise round tires.

It is not surprising that more than 99% of the country's cars roll from the factories on rayon cord tires. Rayon also contributes to safety, comfort or economy in fan belts, convertible tops, upholstery, carpeting, compartment and trunk linings, and spring covers.

Needless to say, both rayon and tire manufacturers have contributed to the development of safe and economical rayon cord tires. The Stauffer organization, too, has shared in this development by supplying Carbon Bisulfide, without which there is no rayon; and Sulfur, without which there is no practical rubber.

Stauffer is the country's first and largest producer of Carbon Bisulfide . . . the country's largest processor of Sulfurs.

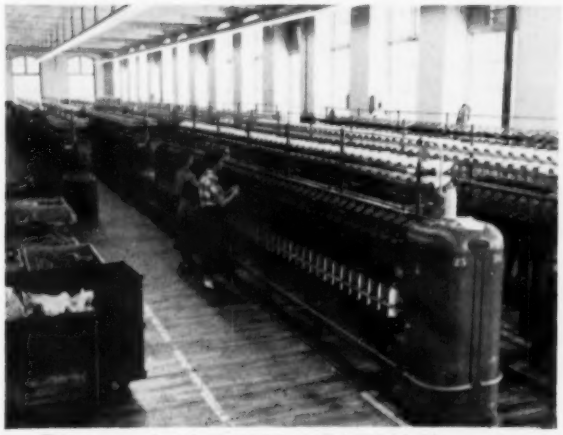
STAUFFER CHEMICAL COMPANY

380 Madison Avenue, New York 17, N. Y.

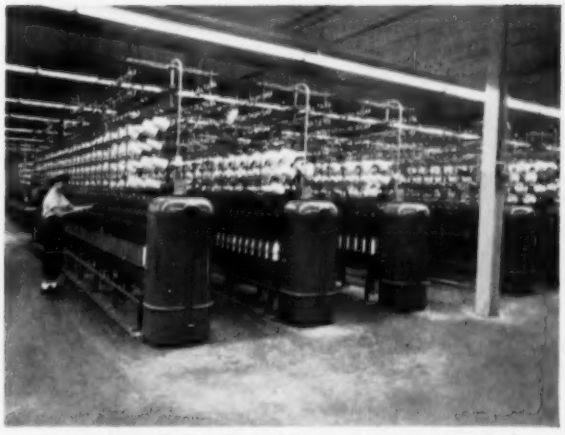
Offices in Principal Cities Throughout the Country

Stauffer CHEMICALS SINCE 1885

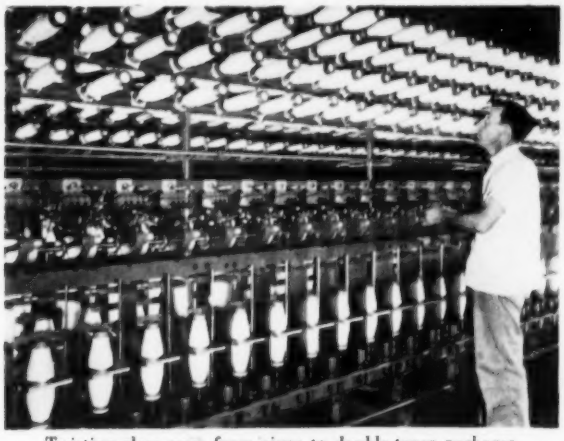
Leesona® Model 10 puts a wonderful twist on any yarn



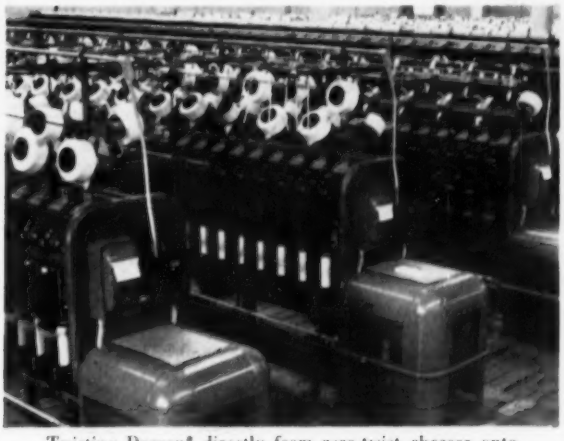
Twisting wool and worsted from spinning bobbins onto taper-top, take-up packages, as supply for winding machines.



Worsted, synthetic and metallic yarns from cones are plied together, twisted and taken up on large packages.



Twisting glass yarn from pirns to double-taper packages which will be used for filling and warping without re-winding.



Twisting Dacron* directly from zero-twist cheeses onto straight wind bobbins for further processing on high speed UNIRAIL® Uptwisters.

The world's best yarns — and all the others too — natural or synthetic — spun or filament can be plied and twisted best on a Leesona Model 10 Ring Twister.

With it you twist single end yarn or combine two to 16 ends, with a twist range of ½ to 55 turns. Automatic stop motion for each end in the ply permits tying knots in singles.

Here's the most versatile of twisting machines ready for any kind of package delivery — cones, cheeses, cakes, pirns, spools, bobbins or tubes. Produces straight wind, taper-top or double tapered take-up packages (filling or warp wind).

For more facts and figures write for Leesona Model 10 Ring Twister Bulletin 10-A.

*Dacron is a DuPont registered trademark.

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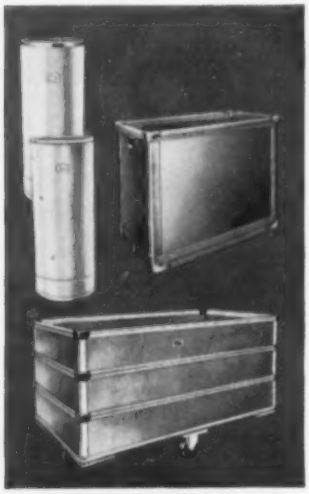
23.7.6

GARMENT MANUFACTURER ENDS CROWDING AND CONFUSION with job-designed Vulcanized Fibre Kennett Receptacles by National. Delicate fabrics used to be stored and moved in plywood and cardboard boxes at the Griffin Garment Co., Griffin, Ga. These makeshifts took up space intended for extra machines and created delay and confusion in work distribution. But when the company put Kennett Receptacles to work, *efficiency rose 25% with a 10% saving in space.* Additionally, women employees found lightweight Kennett Receptacles easy to lift, handle and move.

KENNETT CONTROLS WORK LOAD, SPEEDS PRODUCTION. Work-in-process now travels in Kennett Containers. From these, each operator's work goes into special Kennett Receiving Trays designed to fit under sewing machines (a space formerly wasted.) Another slant-top Kennett Box catches finished work coming from the machine and protects it from dirt and damage. Result: a streamlined operation and more space for extra machines.



JOB-DESIGNED CONTAINERS FOR EVERY NEED can end your materials handling problems. Kennett Receptacles include roving cans, doffing trucks, mill boxes and trays. They are furnished in standard or special sizes in a wide variety of design modifications to fit every textile requirement.

NATIONAL CAN HELP YOU CUT COSTS TWO WAYS. If your problem is *safety* in materials handling, Kennett Receptacles by National can end it. For National Vulcanized Fibre is glossy smooth, resilient and long wearing—won't crack, dent or break, won't rust or corrode, won't damage delicate fabrics or expose them to damage. If your problem is *speed and efficiency*, National can help solve that too. A National Materials Handling Specialist is always available to help you adapt the broad Kennett Line of containers to your exact need. Simply write for our booklet, "Materials Handling for Textile Plants." Address Dept. W-10.

NATIONAL
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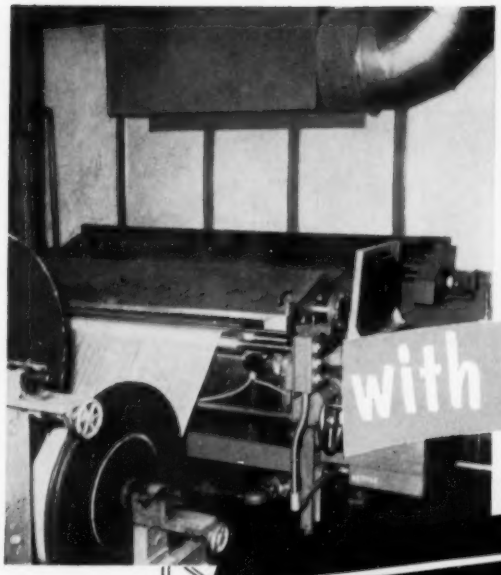
WILMINGTON 99, DELAWARE
In Canada:
NATIONAL FIBRE CO. OF CANADA, LTD., Toronto 3, Ont.



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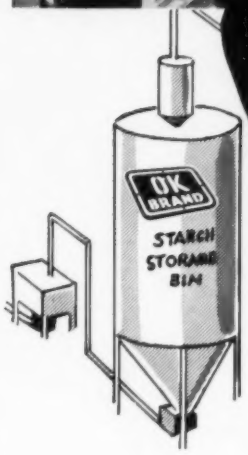
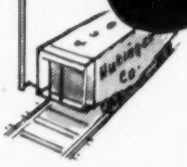
STARCHES and GUMS





There's a complete line of superior, quality controlled, OK BRAND textile starches and gums to help you get improved finishing, printing and sizing, reduce your costs, and assure you of consistent quality in your production.

You can enjoy all these benefits with the greatest of ease because better, more convenient systems for handling starches and gums have been developed by Hubinger textile experts. One of these trained, experienced textile technicians is near-by, prepared to help with any *special problems* you may have, too. For prompt attention to your needs without obligation, write, wire or phone:

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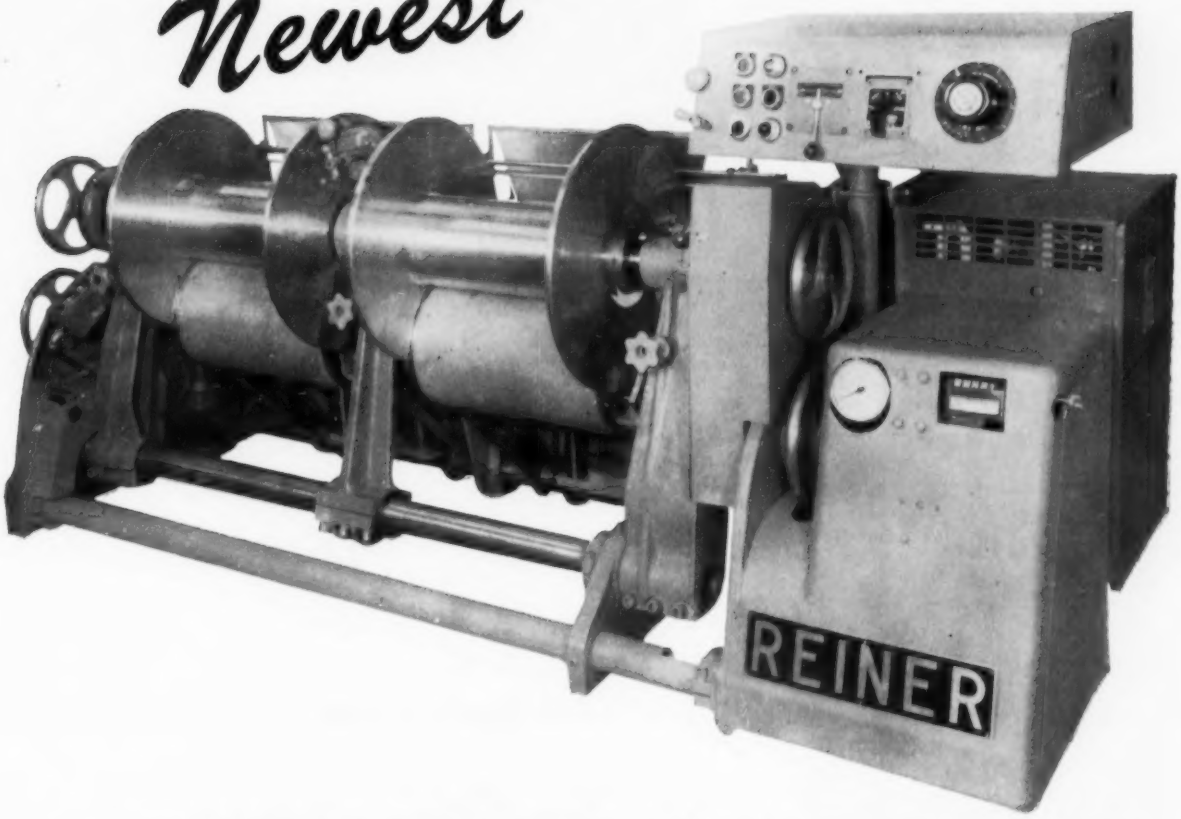

REINER WARPER ACHIEVEMENT

Designed to:

- Reduce warping costs
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- Reduce yarn strain and imperfections
- Simplify operation
- Permit warping of either one 42" tricot beam, or two 21" tricot beams simultaneously

FEATURES:

- Low, compact, functional design throughout
- Convenient access to yarn and controls
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- Can be adapted to tomorrow's larger flange diameter beams up to 32"
- Automatic doffing from beam carrier wagon, floor or dolly.
- Can also be built for single 21"—42"—50" and 84" beams, or dual 42" Tricot/50" Raschel warper.

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Reiner offers a full line of equipment which includes: Knitting Machines — Warpers — Beamers — Creels — Famatex Tenter Frames — Gerber Wet Finishing Machines — Gauged Doubling, Measuring and Examining Machines, Cloth Control and Marking Devices, etc., plus a ready supply of spare parts.

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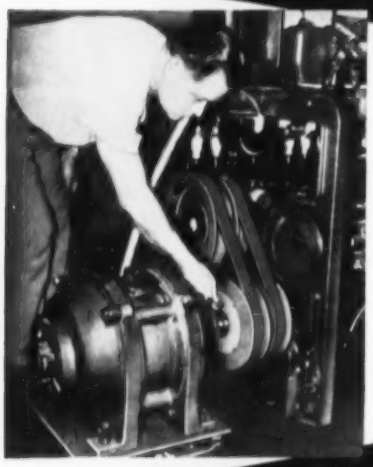

COMPONENTS OF
DODGE SPINNING FRAME DRIVE

- Variable Sheave with Automatic Pitch Diameter Gage
- Taper-Lock Companion Sheave
- Slide Motor Base
- Dodge Sealed-Life Belts

No more "cut and try" with the new Dodge Variable Sheave

An automatic Pitch Diameter Gage, graduated in tenths of an inch, is mounted on the outside flange of the new Dodge Variable Sheave. A spiral line on the hub intersects with the gage dial as the flanges are moved in or out. Pitch diameter is read directly on the dial.

Quickly . . . accurately . . . easily . . . you get the pitch diameter you want with a one point adjustment. The variable sheave locks as a unit when tightened on the shaft, utilizing the Taper-Lock principle.

Single or double strand drive

The Dodge Variable Sheave is available for both single or double strand drives — utilizing R-Section Sealed-Life V-Belts in the single or double strand and W-Section in the single strand only. The new, higher ratings of these belts, which contribute to the larger load carrying capacity of the Dodge Variable Speed Drive, open new opportunities for drive economy — both in initial cost and in maintenance. All components — the new sheave, companion sheaves, belts and motor base — are available from stock. Write for full details.

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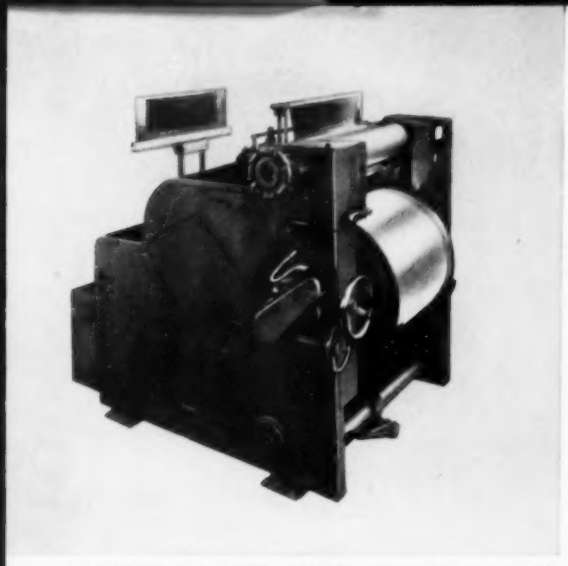
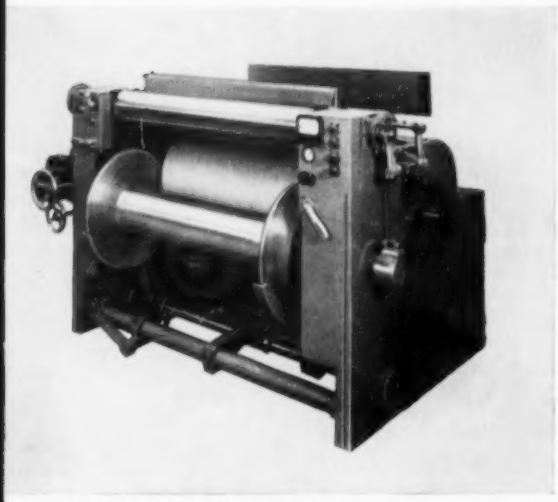
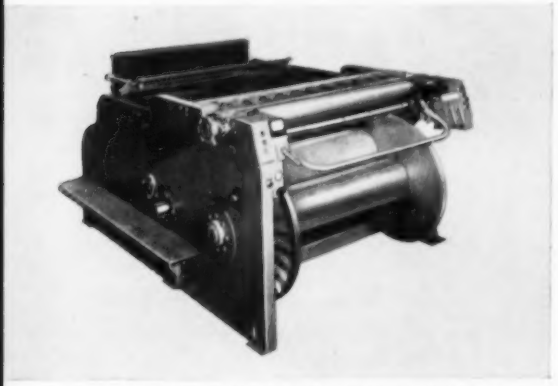
Call the Transmissioneer, your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new cost-saving methods. Look for his name under "Power Transmission Equipment" in your classified phone book.



1 KIDDE-SIPP 21" TRICOT WARPER—handles beams with 14" or 21" diameter flanges and with lengths up to 21". Minimum yarn speed is 75 YPM; maximum is 600 YPM.



2 KIDDE-SIPP 42" TRICOT WARPER is the same as the 21" Warper except that it will handle beams up to 42".



3 KIDDE-SIPP HIGH-SPEED COTTON SYSTEM WARPER—handles 54¼" or wider beams with flanges up to 36". Pushbutton controls. Constant yarn speeds to 900 YPM.

3 NEW WAYS ...to make better beams

ALL THREE of these new Kidde-Sipp warpers make better beams because all three have these Kidde-Sipp features:

Beam doffs automatically—even a girl can doff a 2000 pound beam easily, in a hurry, and single-handed. She just pushes a lever and a hydraulic system does the work . . . swings the beam down and out of the warper.

Yarn is never scuffed—because brakes on the measuring roll, compression roll, and beam are all synchronized electrically. When one stops, they all stop simultaneously. There's no strain to scuff the yarn.

Yarn builds up evenly—because the compression roller has 2 hydraulic cylinders—one at either end (instead of just 1 in the center). This produces even, balanced pressure which assures even build-up of yarn. And hydraulic loading ends all chatter and bounce.

Because there are neither counter shafts nor chains and sprockets in the drive, smooth and trouble-free operation is assured. There are a lot more good reasons why you get a better beam with these three Kidde-Sipp warpers. Find out more about it by writing to Dept. WB.

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS • BEAMERS
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WANT UNIFORM ROLL LOADING?

Here's the field-tested Taylor answer

1 **Easy-to-read dial** gives direct pressure readings of actual roll pressure. Also available with remote indication or record for panel use.

2 **One knob** adjusts actual roll pressure.

3 **Unit** is mounted directly over the journal. Pressure is applied directly to the roll.

4 **Spring automatically** raises roll when supply pressure is shut off.

5 **Volumetric element** — a Taylor development—measures pressure being applied directly to squeeze roll.

The Taylor Squeeze Roll Pressure Controller tells you just how much pressure you have on each end of your size box squeeze roll. It measures and permits manual control of actual *pounds of pressure* applied *directly* to the roll . . . unaffected by friction or leaks in air cylinder.

One unit is installed on each end of the roll. Each can apply up to 1000 pounds pressure, for a total pressure of 2000 pounds plus the weight of the roll.

For Calender Rolls, Dye Padder Rolls, and other higher pressure applications, a similar unit is available with a 2500 pound capacity . . . to deliver up to 5000 pounds pressure plus the weight of the roll, when used in pairs.

Taylor Squeeze Roll Pressure Control has been thoroughly field tested in a number of textile mills. It is a logical outgrowth of Taylor's development of the volumetric measuring principle for difficult tension and pressure measuring jobs. Units are available for pressures up to 200,000 pounds and tensions from 0 to 30,000 pounds.

For full details on Taylor's Squeeze Roll Pressure Control, or for help on any similar load control problem, call your Taylor Field Engineer or write for **Bulletin 98232.** Taylor Instrument Companies, Rochester, N.Y., or Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*

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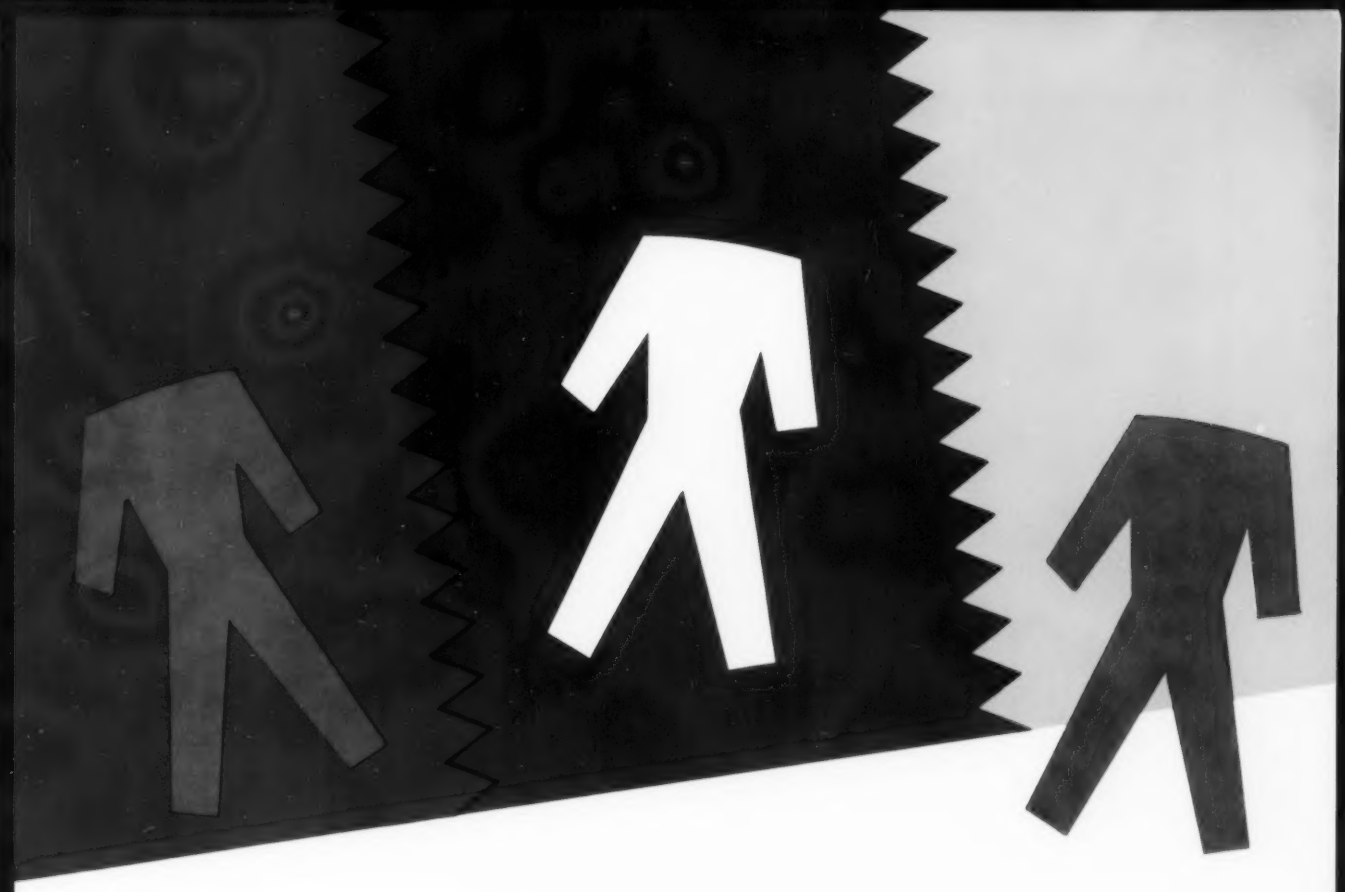
VISION · INGENUITY · DEPENDABILITY



Announcing 3 new "SEVRON"* colors

offering outstanding lightfastness and wetfastness in dyeing "ORLON"* in men's suiting shades

"SEVRON"
RED GL

"SEVRON"
BLUE BGL

"SEVRON"
YELLOW 3RL

Outstanding fastness properties make these three new colors ideal for dyeing "ORLON" acrylic fiber in blends with wool, cotton and rayon in men's suiting shades. Their high degree of compatibility in dyeing rate permits combinations which will produce a complete color range of light to medium tan and gray shades.

Other major advantages of these three new types of chemically unique "SEVRON" colors are: stability over wide variations in dye bath acidity; and very little wool staining in strengths up to 2.0%.

Information on the three new colors and on the entire "SEVRON" family is yours for the asking. Write E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Dyes and Chemicals Division, Wilmington 98, Delaware.

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Better Things for Better Living . . . *through Chemistry*

Du Pont Dyes

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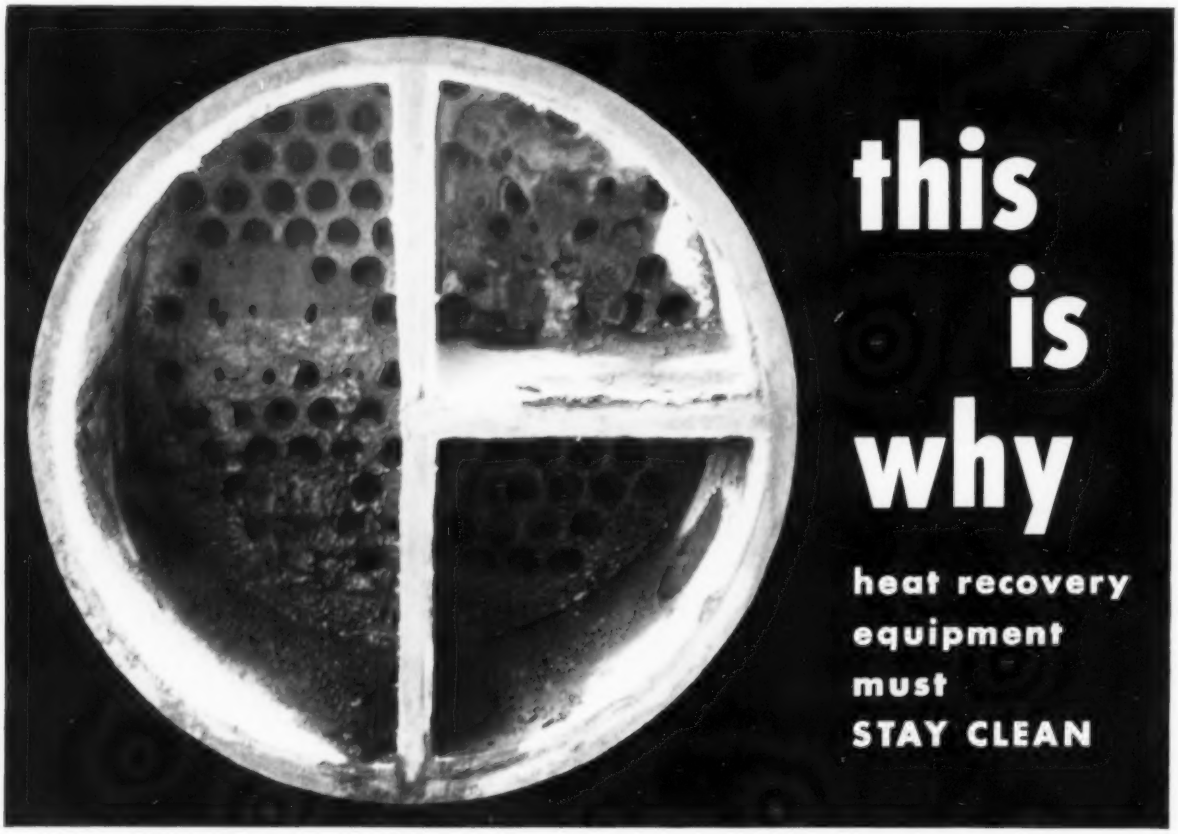
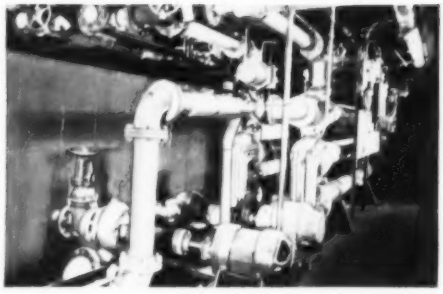


Unretouched photograph shows why this obsolete heat reclaimer was abandoned after only nine months of intermittent operation. A heavy muck deposit continuously builds up in this type of heat recovery equipment, as shown, after each cleaning.



Manual cleaning of old style waste water heat recovery equipment results in failure of performance as shown above. Labor of cleaning and downtime are costly. Because the work of cleaning is filthy, the equipment is neglected by plant personnel.

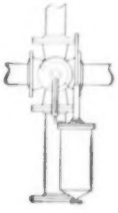
Efficient transfer of heat from polluted water to incoming water is accomplished only when the flow is unimpeded and heat transfer surfaces are clean.

With a Bready System of Heat Recovery, cleaning is automatic. Rated results are continuous *and guaranteed.*

Do you want more information on the advantages of a Bready System for recovering the heat from your plant's waste water? Mail a card to Ludell today.

CONTINUOUS TUBES

Only the Bready System has the patented continuous tube feature that permits lint and other solids to be completely backflushed directly to the sewer.



AUTOMATIC BACKFLUSHING

Timed backflushing, combined with the Bready exclusive, continuous multi-tube construction completely prevents stop-up of the system.

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News IN BRIEF

ACMI Calls for Antidumping Changes. The American Cotton Manufacturers Institute has filed a brief with the House Ways and Means Committee, calling for the following changes in the Antidumping Act of 1921: Require the Tariff Commission to presume that an American industry has been or will be injured unless lack of injury can be proved; define "industry" to mean a segment of the industry, as in the Trade Agreements Act, with the geographic segment principle incorporated in the definition; and set a time limit of perhaps 90 days in which the Treasury must act on complaints of dumping and publish determinations.

Discuss Urge to Merge. "Mergers and Acquisitions" will be the subject of a special three-day conference sponsored by the American Management Association, to be held at the Waldorf-Astoria Hotel, New York, October 16-18. Following this, a workshop seminar on

appraising and financing corporate mergers and acquisitions will be held at AMA headquarters on December 4-6; an orientation seminar will be presented on organizing for, appraising, and financing corporate mergers and acquisitions at AMA headquarters on November 20-22; and an orientation seminar on joint ownership as a means of corporate expansion will be held at AMA headquarters on January 29-31. Details are available from AMA, at 1515 Broadway, New York 36, N. Y.

Calls for Three-Way Trade. In a letter to Senator Talmadge of Georgia, Avondale Mills' executive committee chairman Donald Comer has called for three-way trading, involving U. S. cotton,

Japanese textiles, and other nations' products, as a means to solving the textile industry's import troubles. As an example, he suggests that Japan can trade her textiles to Southeast Asian countries for tin and rubber, which she can then trade to us for raw cotton or other agricultural products.

Union Social Security Demands. The AFL-CIO has proposed that hospital and medical care be added to the benefits from Social Security, and that maximum benefits be increased from $108.50 to $150 per month. To pay for the increased benefits, the union recommends that taxes be raised to a maximum of $70 a year each for employers and employees, and to $105 a year for the self employed. Actuaries estimate that at this rate taxes would fall at least 15 per cent short of the expected cost.

Cotton Fabrics Output Drops. The National Association of Finishers of Textile Fabrics estimates that textile finishing plants processed 3.9 billion yards of fabrics in the first half of 1957, a drop of more than 7 per cent compared to the same quarter of the previous year. Bleached goods were off almost 10 per cent and prints over 14 per cent; plain dyeing operations were up over 2 per cent.

NFI Invites Glass Weavers. The board of directors of the Narrow Fabrics Institute has authorized formation of a section covering glass narrow fabrics; all weavers of such fabrics are invited to become members.

Treatment for Textured Yarns. Deering Milliken Research Corp. has developed a process for producing a modified stretch or bulked yarn by post-treatment of crimped yarns. The equipment used for the process is adaptable for installation on ring twisters of the Atwood Model 10 type, and can be used on Agilon, Helanca, Ban-Lon, Fluflon, Superloft, and other textured yarns. Applications for patents on the method are pending, and mills will be licensed to use it on a royalty basis.

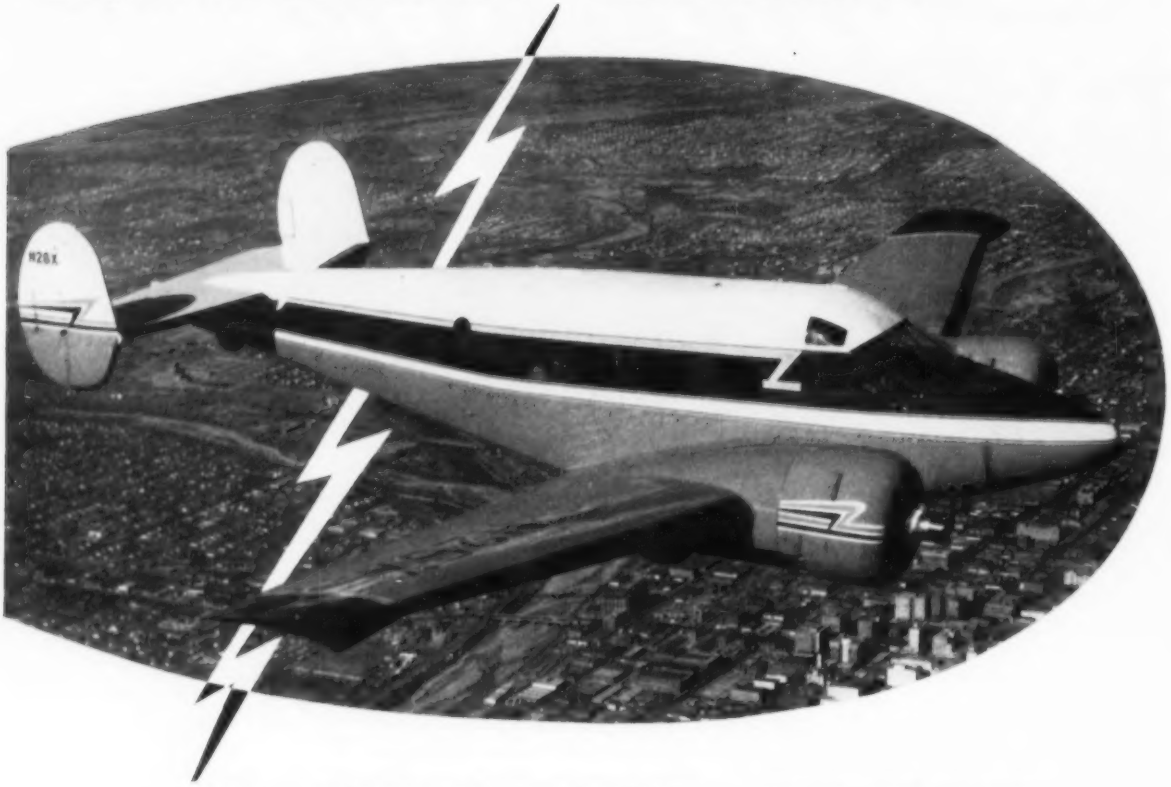
Colored Sheets for Hospitals. The Du Pont Co. reports that color is being used increasingly in hospital linens—sheets, pillow cases,

and towels. It is said that many of the hospitals are doing the dyeing themselves, in wash wheels in the hospital laundries.

Pensioners Like Lump Sum. Lump-sum payments rather than monthly checks have been chosen by a considerable number of per-

now...

Super 18 Executive Beechcraft



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The finest Super 18 Beachcraft in the air. Equipment includes new RCA AVQ-50 radar, Geisse safety landing gear, complete lightweight all-weather radio.

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airfleet of the textile industry

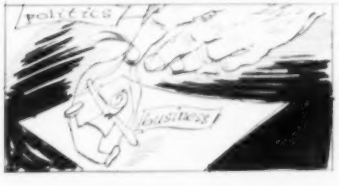
sons retired from employment at Chatham Mfg. Co., Elkin, N. C., under an option approved by the U. S. Treasury Department.

Synthetics Use By Military. Textile items delivered to the U. S. armed forces in the first quarter of 1957 contained 2,118,000 pounds

of man-made fibers, or 9 per cent of total cotton and man-made fibers used by the military, compared to 7 per cent in the previous quarter.

Cotton in Pressure-Sensitive Tapes. Cotton accounts for about 95 per cent of the textile materials used in the manufacture of pressure-sensitive industrial tapes, according to a recent report published by the National Cotton Council. However, textiles account for less than 10 per cent of total production, while plastic and paper account for more than 90 per cent. Research can enable cotton to gain more of the market and can also increase the total market, according to the report, copies of which may be obtained from the Market Research Section of the Council, Box 9905, Memphis 12, Tenn.

Businessmen Must Politic. "Businessmen must get into politics and government or face the possibility of being forced out of business by self-seeking legislators who regard industries not as assets but as a

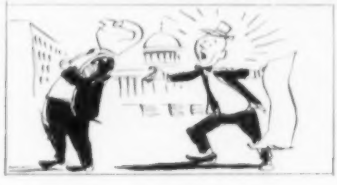


new source of political exploitation," says T. M. Forbes, executive vice-president of the Cotton Manufacturers Association of Georgia. The most important thing that businessmen can do is to elect competent and unselfish men to the state legislatures, according to Mr. Forbes.

Stretch Top for Socks. A stretch top for men's socks, using a thermoplastic yarn instead of rubber, has been patented by Delos M. Elder and W. Cliff Elder of Burlington, N. C. The top will be licensed to other hosiery firms.

Wool Quota Filled. The 14 million-pound quota for woolen and worsted fabric imports was filled late in July; since that time fabrics covered by the quota have been charged at the rate of 45 per cent ad valorem, rather than 25 per cent.

Direct Subsidy for Cotton? Congress and the cotton industry favor legislation which would permit American cotton prices to fall to world levels, with direct payments to farmers making up the difference between the world price and 90 per cent of parity on domestic

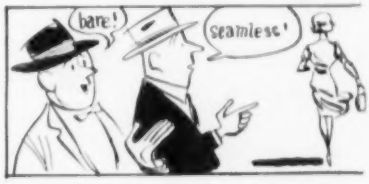


consumption, according to Rep. Harold D. Cooley (D., N. C.) in a reply to a letter from Lester Martin, president of Bates Mfg. Co. But, said Rep. Cooley, "You are certainly right in your statement that the Department of Agriculture, by its opposition to every reasonable piece of legislation, has caused such confusion that we in Congress are unable to enact the improvements needed in the laws relating to cotton."

Prop Drop Could Be Catastrophe. Textile men usually decry the government's price support program for cotton, but Leon Lowenstein, board chairman of M. Lowenstein & Sons, Inc., has written Agriculture Secretary Benson that withdrawal of supports would cause substantial losses on grey goods inventories. Citing 80-squares as an example, he said, "If cotton price supports were withdrawn, and prices dropped say 10 cents a pound, there would be a staggering loss that buyers of grey goods—the converters—would sustain."

News in Brief

Seamless Fad a Bare-Leg Aid? Current popularity of seamless hosiery may backfire by encouraging the bare-leg trend, according to the views of one merchant



quoted by the National Retail Drygoods Association. Since it is hard to tell if a woman wearing seamless hose has on any stockings at all, she may finally decide that, since the appearance is so similar, why spend money on hose?

Mill to Expand If Voted Out. A committee of businessmen in Chester, S. C., has started a movement to vote the Springsteen plant of The Springs Cotton Mills out of the city limits. If the move is successful, Col. Elliott Springs, president of the company, has committed himself to a substantial increase in plant capacity.

Wool for City Cars. Mayor Hines of Boston has issued instructions that in the future all cars bought by the municipal authority must be

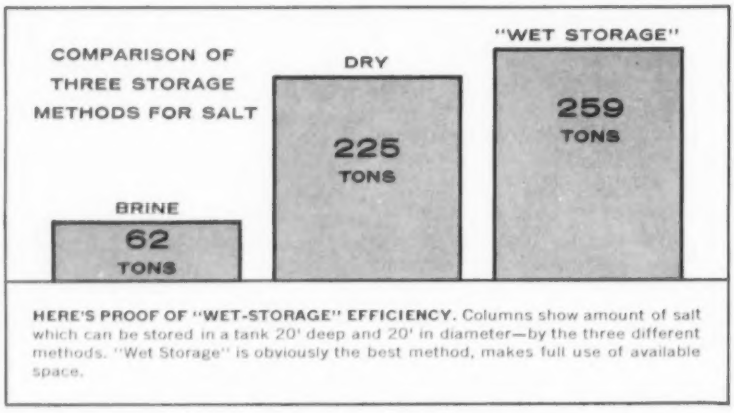
fitted with wool upholstery. The mayor describes Boston's wool industry as "one of the foundation stones of our community life."

Hosiery Shipments Down. Total hosiery shipments for the first half of 1957 were 69.7 million dozen pairs, down 4.2 per cent from the figure for the similar period of last year, according to a report from the National Association of Hosiery Manufacturers. In the different categories, men's socks were down 12.7 per cent; children's, infants', women's, and misses' socks and

Using Salt Efficiently

by **INTERNATIONAL SALT COMPANY, INC.**—America's largest producer of salt

"Wet Storage"—an Economical Way to Store Rock Salt



HERE'S PROOF OF "WET-STORAGE" EFFICIENCY. Columns show amount of salt which can be stored in a tank 20' deep and 20' in diameter—by the three different methods. "Wet Storage" is obviously the best method, makes full use of available space.

A problem frequently encountered by salt-using companies is how to make the best use of available tank space for rock-salt storage. There are three basic ways to store salt in tanks: in brine form, in dry form, and in "wetted" form (dry salt stored under covering brine). Each method has certain advantages.

Salt stored in the form of fully saturated brine offers the important advantage of convenience: the brine can be pumped to points of use in the plant, eliminating salt-handling expense. However, the amount of salt which can be stored in this way is relatively small, because each cubic foot of brine contains only about 19¾ lbs. of salt in dissolved form.

Salt stored in dry form makes far better use of available tank space: each cubic foot contains an average of 72 lbs. of rock salt—about 3.6 times the amount which can be stored as brine. However, moving dry salt to points of use is time-consuming, inconvenient, and expensive. And dry-salt measurement is not as exact, or as easy, as measurement of fully saturated brine.

To get the benefits of fully saturated brine, along with the space-saving storage of dry salt, many salt-using companies are now using the tank-storage method known as "Wet Storage." This method—which actually combines features of dry storage and brine storage—offers these advantages:

1. Any given tank can store *more* salt than is possible when either dry salt or saturated brine is stored by itself.

2. There is a constantly available supply of fully saturated brine for every plant need.

3. Much less handling of rock salt is required. There are fewer salt deliveries, fewer brine-making problems.

How "Wet Storage" works. When a tank is filled with dry rock salt, almost half the storage space is actually "empty," because the salt crystals do not pack solidly together. But when the voids between the crystals are occupied by fully saturated brine, additional amounts of salt can be stored. This is because fully saturated brine itself contains 2.65 lbs. of salt per gallon. Thus, with salt stored both "wet" and in brine form in the *same* tank, maximum space is used for salt storage.

For example: in a circular tank 20 ft. in diameter, and 20 ft. in storage depth, the following amounts of salt can be stored, using the system of wet storage:

In "wetted" form the tank will hold about 231 tons of rock salt. In addition, there will be about 28 tons of salt dissolved in the covering brine. Total salt contents of the tank: 259 tons. Compare this with the other two salt-storage methods: The same tank will hold only 62 tons of salt dissolved in brine and about 225 tons in dry form.

Lixator best example of "Wet Storage" principle. Storing salt under covering brine is the basic operating principle of International's exclusive Lixate Brine-Making Process. In the Lixator, dry rock salt and fully saturated brine are combined, making fullest use of available storage space—and, at the same time, providing pure, crystal-clear brine for immediate use when and where it's needed.

In the Lixator (which is filled with rock salt), water is admitted at the top. This water dissolves some of the rock salt, to make fully saturated brine. This brine then fills the voids between the remaining salt crystals. As brine is drawn off, it is completely filtered by the salt crystals in the bottom portion of the Lixator. More rock salt is then automatically fed into the Lixator from the storage supply, and more brine is made to occupy the empty spaces.

Today, International offers many types of Lixators—all based on the principle of "Wet Storage." There are Storage Lixators, Silo Lixators, Sterling Model Lixators—in numerous designs to suit any plant layout.

TECHNICAL SERVICE WITH YOUR SALT

Through skilled and experienced "Salt Specialists," International can help you get greater efficiency and economy from the salt you use. International produces both Sterling Evaporated and Sterling Rock Salt in all types and sizes. And we also make automatic dissolvers in metal or plastic for both kinds of salt. So we can recommend the type and size of salt most perfectly suited to your needs.

If you'd like the assistance of an International "Salt Specialist" on any problem concerning salt or brine—or further information on "Wet Storage"—just contact your nearest International sales office.

International Salt Co., Scranton, Pa.

Sales Offices: Atlanta, Ga.; Chicago, Ill.; New Orleans, La.; Baltimore, Md.; Boston, Mass.; Detroit, Mich.; St. Louis, Mo.; Newark, N. J.; Buffalo, N. Y.; New York, N. Y.; Cincinnati, O.; Cleveland, O.; Philadelphia, Pa.; Pittsburgh, Pa.; and Richmond, Va.

FOR INDUSTRY, FARM, AND THE HOME—

STERLING SALT

PRODUCT OF INTERNATIONAL SALT CO., INC.

anklets showed an increase of 5.6 per cent; women's full and knee-length stockings were down 2.6 per cent over-all, with full-fashioned hosiery posting a decrease of 13.1 per cent and seamless up 30.3 per cent.

Court Upholds Orlon Mislabeling Decree. A Federal judge has held that three affiliated companies are in contempt of court for violating a decree enjoining them from representing pillows and comforters as 100 per cent Du Pont Orlon. The judge ruled that Du Pont is entitled to damages.

News in Brief

MERCHANDISING NOTES

"Bride and Home." a Hearst magazine, includes a special cut-out catalog of the twelve most-used synthetic fibers in its fall issue. Intended as a homemaker's

purchasing guide, the catalog gives a rundown on how to choose the synthetics to do the job for which they are best suited.

Du Pont predicts that a blend of 50 per cent or more of Dacron with Orlon will be the fastest growing new blend for men's suits and slacks next spring, with most major manufacturers carrying it in their lines. * * * The company reports that the most important daytime fabrics seen in the fall-winter Paris collections were bulky stylings with rustic, nubby, tweedy textures, with downy, brushed surfaces, and in shaggy or hairy effects.

Goodman & Theise is marketing a necktie in which the interlining

has a Fiberglas filling, to make it crush resistant.

Hanes Hosiery Mills have shipped a quarter of a million pairs of hosiery to California, in what is said to be the first full-carload shipment of its type.

A. & M. Karagheusian report that the corridors and study areas of an elementary school in Bryan, Tex., have been completely carpeted; former misgivings of teachers have been reversed because the noise reduction has created a quieter, calmer work atmosphere.

Lawrence Knitting Mills' president Lawrence Levy is reported to have turned up at his Charlotte, N. C., office recently wearing Bermuda shorts. He is, incidentally, trying to interest cutters in producing knitted walking shorts.

Denim Council has picked a former California policeman and his family as "National Denim Family" for 1957. They were taken to New York in mid-August for a round of fun and promotional activities for denim.

Pepperell Mfg. Co. reports that a recent survey among housewives showed that 55 per cent of those interviewed owned colored sheets, and that 33 per cent were certain they would buy them again.

Raeford Worsted Corp., a member of Burlington Industries, has introduced "Raeford 2/80," made of 2/80s worsted yarn from 80s wool. The fabric weighs 5½-6 oz per yd. The yarn is claimed to be the finest ever spun on a production basis in this country.

Dow Corning Corp. is promoting its Syl-mer water-repellent finish with a series of three singing com-

mercials on 41 radio stations across the country during the company's fall store promotion campaign.

American Viscose Corp. has initiated a major advertising publicity and promotion campaign for its Avisco super rayon tire cord, spearheaded by a series of full-page advertisements in *The Saturday Evening Post*. Publicity tie-ins include an arrangement with Adrian Williams to use rayon cord tires on an African safari, and use by the Tournament of Thrills, an auto stunt show, of rayon cord.

Nylons are now being individually cartoned for the supermarket trade by Acclaim Hosiery Mills, High Point, N. C. Three varieties, seamless, stretch sheer, and full-fashioned stockings are being packaged for the food trade, each with its own color combination for easy consumer selection.

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***50** varied industries throughout the world!*
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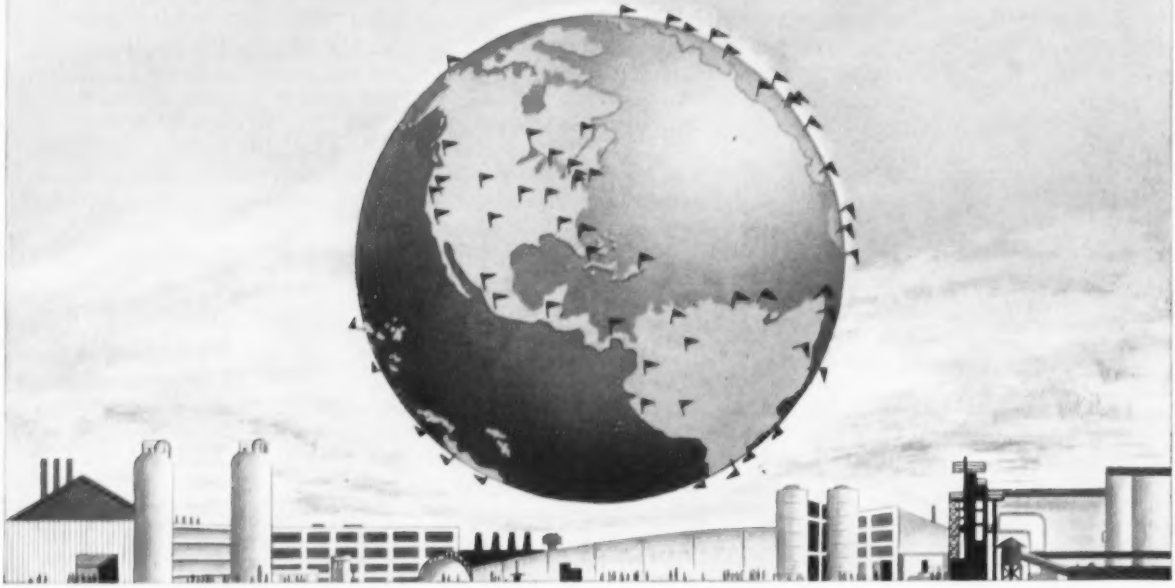

HARSHAW sells chemicals —thousands of them— for these and many other industries throughout the world

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Leather
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Linoleum and Floor Covering
Lubricant
Match
Metallurgical
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Optical
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AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

More on the Secondhand

A supervisor in a southern cotton mill who read "The Secondhand—Keystone of Mill Supervision," which appeared in this department in the June issue, has written us, expanding on some of the views expressed in the original article. His comments are reproduced below.—The Editors.

■ WE HAVE read with a great deal of interest the article, "The Secondhand — Keystone of Mill Supervision." We agree with the writer that the importance of the secondhand, "dangling from the end of the organizational chain of command . . . " (to quote the author) is too often overlooked by those who form the "big links" in this chain of command, and perhaps even by the overseer himself.

Having worked as secondhand for about twenty years, we feel that we know a little something about the secondhand's problems, as well as his hopes and aspirations.

Very early in our textile career, we had been secondhand in one of the departments. The mill had to curtail operations, so we were put to overhauling. Within a few months there was an opening in another department, one in which we had never worked. We were transferred to this department as secondhand.

The overseer of this department had one trait which perhaps did more to help us develop as a supervisor than any other one thing—he believed in delegating responsibility to his subordinates. Never once did he fail to back a man to the limit, when he felt that an honest effort was being made.

WITHIN A FEW DAYS after we became secondhand of this department, he called us into the office and said something to this effect, "I realize that you will have to learn this job, since you have never worked in this room before. When you have had reasonable time to learn, I shall expect you to have charge 'on the floor,' and, when I am away, to have charge of the office. You will make mistakes —a person who never makes an error just doesn't do anything— but I will back you up so long as I know that you have used your best judgment, based on the information which you have available."

"On the other hand," he continued, "if you are faced with a difficult situation—and there will be plenty of them on this job— and you just dilly-dally and wait until I return, rather than making a decision yourself, then I will just have to get another secondhand."

We had plenty of opportunities to remember this little talk in the months and years ahead. On more than one occasion, without any prior notice that he was leaving town, he would call from home and say that he would be away for a couple of days. He made frequent trips when we, of course, knew that he was going. Naturally we pulled some boners, but at least he did not have to get a new secondhand until we left voluntarily for a better job. The going was rough at times, but it paid off in the long run.

IN THIS MILL, disloyalty to the overseer on the part of the secondhand was one thing which would not be tolerated. In the absence of the overseer, a secondhand foolish enough to try to "pass the buck" to his overseer would have been fired on the spot by the superintendent. Our knowledge of this fact caused us to have to take a terrific bawling-out one day—but doubtlessly enabled us to keep our job.

On one of the machines in our department there was the problem of regulating the tension. We had made a suggestion as to how the tension might be measured, which, we felt sure, would have made the regulation of the tension quite simple. Our suggestion, which was the result of a considerable amount of thought and effort, included drawings and detailed instructions for the operation of the device.

Several weeks later, two of the mechanics from the shop came up to our department and proceeded to install a tension-measuring device on this machine—but it was not the apparatus which we had suggested.

The machine operator disliked the device from the start. He said that it was in his way. He fumed and fussed and "cussed," until finally one day the overseer told him to take the d - - - thing off! The operator removed the tension-measuring device in short order and threw it on the floor near the machine.

The next day the overseer was out of town. The superintendent came through the room on his regular round during the afternoon and saw the tension device on the floor by the machine. We were in the office doing some work and we could see him, for this machine

Need help?

TIME SAVER for busy readers

Here is a summary of the major articles in this issue. Use it to organize your reading time most effectively.

Why Sliding Costs Went Down at Clinchfield ... 93

How Kendall Builds Managers ... 97

H.O. for Oxidizing Vats ... 104

Keep Quality Up ... 109

Weave Cotton Goods 200% Faster? ... 113

TEXTILE INDUSTRIES for October, 1957

If you are like most mill men we know, you stay pretty busy trying to make work flow smoothly and keep the boss and the owners happy. You're interested in all new developments in textile manufacturing and recognize the need to keep posted on changes and improvements in machinery, equipment, supplies and services, so that you can make recommendations for changes in production that will increase the efficiency of the operations you control.

Ever since it was founded nearly 60 years ago, TEXTILE INDUSTRIES has done its level best to bring readers facts about current manufacturing techniques that would prove valuable to them. By continued interest in the publication throughout the years, readers have shown that TI is fulfilling its objective. Today, more than ever, mill men tell us they want all the information they can get from TI that will help them meet the demands on them for better, more profitable operations.

To enable you to see at a glance the main editorial features of TEXTILE INDUSTRIES, we have originated a "Time Saver" page. A sample from the current issue is shown above.

Take a look at the "Time Saver" on page 4 when you get your TEXTILE INDUSTRIES each month. You'll find it will save time by helping you to be more selective in your reading.

was just outside the office. We knew from the look on his face that he was boiling mad and that somebody was going to catch the mischief. When he motioned for us to come out, we knew who that somebody was!

And such a dressing down as we got! He accused us of being responsible for having the device removed because our suggestion was not followed. All we could do was to listen. Not once did we tell him what actually happened, or who gave permission for the removal of the device—it would have been the worst thing that we could have done. We did not get fired because the apparatus had been discarded, but most surely would have been fired had we attempted to "pass the buck" to our absent overseer. (This is about enough of our personal experiences, so we had better get on with our discussion of the importance of the secondhand!)

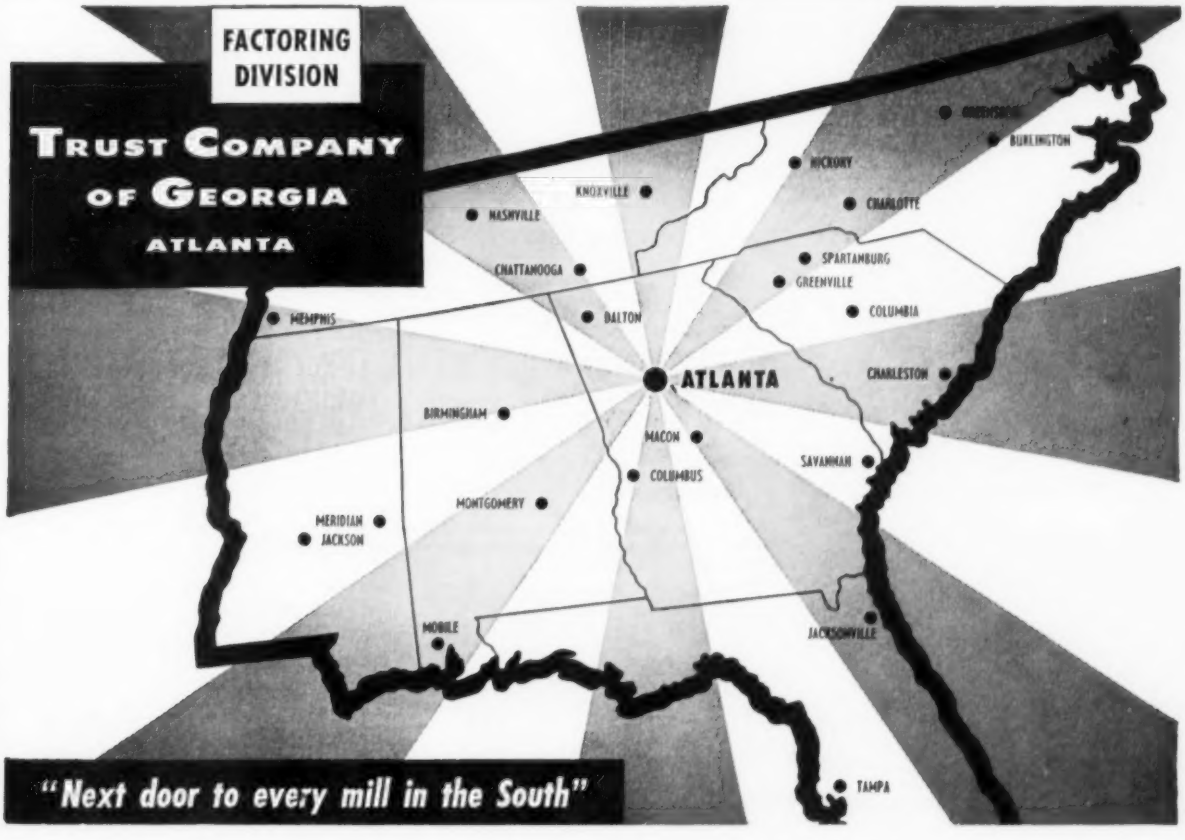
FORTUNATELY, some mills *do* recognize the importance of the part which the secondhand plays in employee relations, waste and cost control, and in day-to-day problems incident to the operation of the plant. Perhaps the pay scale is not what it should be, but recognition is shown in other ways. In our own plant the secondhands are on a salary, or straight-time basis—which means that they still get their pay when out sick, or are absent on account of sickness in the family, or when the plant is not in operation because of a holiday or curtailment of production.

Several years ago our mill manager discussed with the superintendent and the overseers the idea of having a secondhands' meeting. Everyone agreed that this would probably be one of the best moves that could be made. Even if the overseer passed along to his secondhands everything that was brought up at the overseers' meetings—which few of them did—it would not carry the same weight as it would if the secondhands heard the problems presented and all the discussions which followed.

It is one thing for the overseer to tell the secondhand that such-and-such customer is complaining about black oil spots, and quite another for the secondhand to hear the customer's letter of complaint read, citing the difficulties that the oil spots in Style XYZ are causing him, and what he proposes to do if this condition is not corrected at once.

Perhaps the subject of waste is up for discussion. The secondhand is actually in a better position than the overseer to suggest ways and means for reducing the waste in his particular department. The same thing applies to cost, safety, or any other problem closely related to the regular mill processes.

The secondhands' meeting in our plant is now being held every two weeks. The first shift secondhands meet immediately following the



HOW TO CAPTURE A MARKET...

build first textile mill in Los Angeles

This is one of the forecasts contained in an important and carefully documented survey just completed, on the feasibility of primary textile mills in California.

At the request of Mayor Norris Poulson of Los Angeles, his COMMITTEE FOR THE DEVELOPMENT OF THE TEXTILE AND APPAREL INDUSTRY retained the nationally recognized research and marketing firm of Fessenden Blanchard and Morrell to conduct a comprehensive study of factors related to the practicability of establishing primary textile mills to meet the growing demand for fabrics on the Pacific Coast.

Management heads of existing mills in the East and Southeast are invited to write for this vital report. In it they will find documented statistics on the utilization of fabrics by the Pacific Coast Apparel Industry, classified both as to quantity and type.

Also included is data on the secondary market potential for industrial fabrics. California's labor market – past, present and future – is analyzed in detail. Of particular interest and significance to textile mill operators, is the study of previous attempts to establish mills in this area, with conclusions drawn from recently collected information.

TOPICS CONTAINED IN THE "FEASIBILITY STUDY"

• Market Potential • Finishing Facilities • Labor Factor • California Cotton • Power: Availability and Cost • Transportation and Freight Costs • Previous Attempts • Water: Availability and Costs • Building Costs • State and Local Taxes • Existing Mills

COPIES OF THIS IMPORTANT REPORT ARE NOW AVAILABLE ON REQUEST

Write for "A Study of the Feasibility of Primary Textile Mills in California." Address all inquiries to **Mr. I. Bud Whiser, Chairman; 1024 S. Maple Ave., Los Angeles 15, Calif.**

THE MAYOR'S COMMITTEE FOR THE DEVELOPMENT OF THE TEXTILE AND APPAREL INDUSTRY

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overseers' meeting. The superintendent, the assistant superintendent, and frequently the plant manager stay for this meeting. These same officials meet with the second-shift secondhands in the afternoon. The night superintendent meets with the third-shift secondhands, although at times the assistant superintendent will join them, especially when important topics are up for discussion.

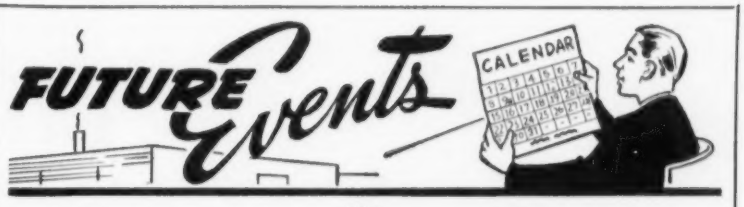
These meetings have given the secondhands added prestige. They know what is going on and have a feeling of "belonging," of being a part of the management team. If business is good, they know it; if bad, they are aware of this condition, also.

An added benefit, and one that was not necessarily intended, is that the plant manager and the superintendent have a splendid opportunity in these meetings to size up the men. They can note how well the men express themselves when a discussion is going on, or even when the men are just having a bull session. They can observe how well they get along with their fellow secondhands, and who is inclined to "pass the buck" when the going gets rough. In short, they can get a pretty good idea as to the kind of overseers these secondhands would make.

CONTESTS, with monetary awards, are sometimes put on, especially in waste reduction. The secondhands on each shift share with the overseer in these awards, when their department is the winner.

While we will all agree that it is very important that the secondhand be able to cope with the technical problems which he will encounter on his job, we think that it is equally important that he understand how to deal with the human relations problems which he has to face day after day. Many a good fixer or section man has been ruined by making him secondhand. A man may know the machines from A to Z, but if he does not know how to get along with people, he is not suitable material for a supervisory position.

Too many apparently insignificant complaints have grown into costly grievances because some

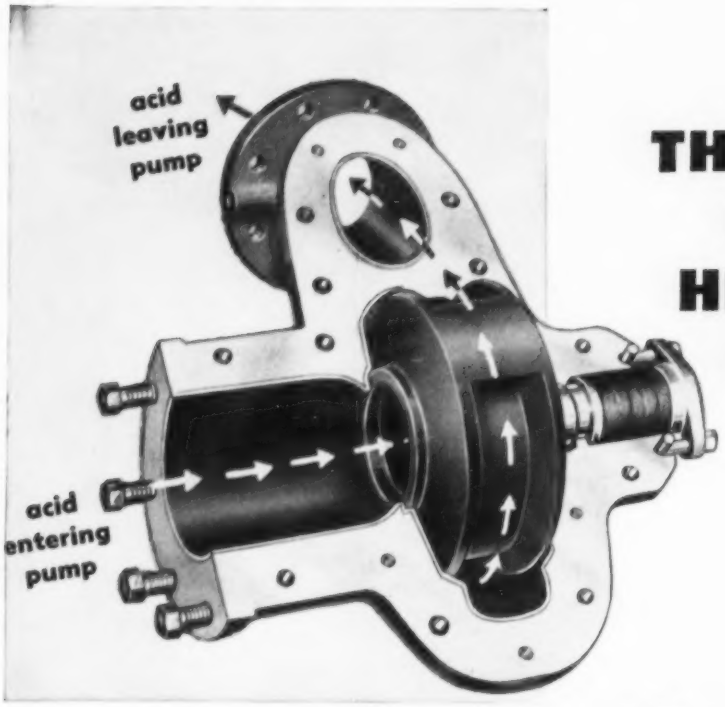


1957

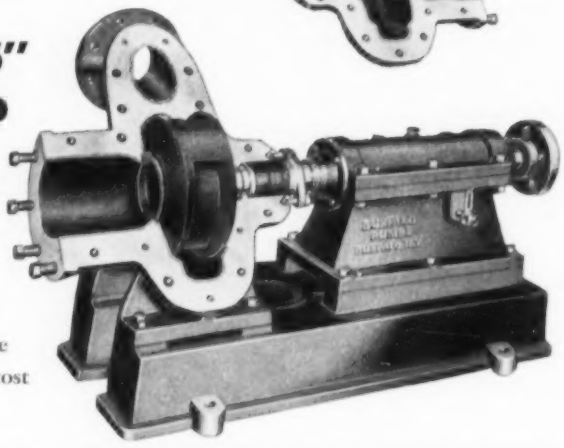
Date	Event	Location
Oct. 2-3	Chemical Finishing Conference	Hotel Statler Washington, D. C.
3-4	Quartermaster Association annual convention	Fairmont Hotel San Francisco, Calif.
4	Hudson-Mohawk Section AATCC	Albany, N. Y.
7-9	Institute of Textile Technology Technical Advisory Committee and Board of Trustees meeting	ITT Charlottesville, Va.
9-10	Throwsters Group, National Federation of Textiles, annual outing	Seaview Country Club Absecon, N. J.
10-11	Fall meeting Southern Textile Methods and Standards Association	Clemson House Clemson, S. C.
12	Textile Operating Executives of Alabama fall meeting	Thach Auditorium Auburn, Ala.
15-18	A.S.T.M. Committee D-13 fall meeting	Sheraton McAlpin Hotel New York City
19	Northern North Carolina Virginia Div. STA, 10:00 AM	Fieldcrest Mills Fieldale, Va.
21-25	National Safety Congress & Exposition	Hotel Conrad Hilton Chicago, Ill.
24	Rhode Island Section AATCC	Providence Engr. Soc. Providence, R. I.
25	Niagara Frontier Section AATCC	St. Catherines, Ont.
26	Eastern Carolina Div. STA 10:00 AM	N. C. State College Raleigh, N. C.
26	Mid-West Section AATCC	Bismarck Hotel Chicago, Ill.
Oct. 30-Nov. 1	National Time & Motion Study and Management Clinic	Hotel Sherman Chicago, Ill.
Nov. 1	Delaware Valley Section AATCC	Kugler's Restaurant Philadelphia, Pa.
1	Western New England Section AATCC annual meeting	Hartford, Conn.
9	South Carolina Div. STA 10:00 AM	Clemson College Clemson, S. C.
14-15	A.I.E.E. Conference on Textile Industry Applications	N. C. State College Raleigh, N. C.
14-16	AATCC National Convention	Hotel Statler Boston, Mass.
Dec. 6	New York Section AATCC	New York City
6	Northern New England Section AATCC annual meeting	Hotel Continental Cambridge, Mass.
7	Southeastern Section AATCC	Biltmore Hotel Atlanta, Ga.

1958

Jan. 30-Feb. 1	Textile Div., American Society for Quality Control annual conference	Clemson House Clemson, S. C.
Feb. 12-14	Cotton Research Clinic	Carolina Hotel Pinehurst, N. C.
Mar. 6-7	Textile Quality Control Association	Poinsett Hotel Greenville, S. C.
18-21	A.S.T.M. Committee D-13 spring meeting	Sheraton Park Hotel Washington, D. C.
Apr. 10-12	American Cotton Manufacturers Institute annual meeting	Hollywood Beach Hotel Hollywood, Fla.
16-18	Alabama Textile Manufacturers Association annual meeting	Hotel Buena Vista Biloxi, Miss.
21-22	National Association of Hosiery Manufacturers annual meeting and Hosiery Industry Conference	Hotel Roanoke Roanoke, Va.
23-26	Cotton Manufacturers Association of Georgia	Boca Raton Hotel & Club Boca Raton, Fla.
30-May 1	The Fiber Society	Clemson House Clemson, S. C.
May 1	Underwear Institute annual meeting	Hotel Biltmore New York City
6-8	Canadian Textile Conference	Queen Elizabeth Hotel Montreal, Que., Can.
June 4-7	Tufted Textile Manufacturers Association annual meeting	Castle-in-the-Clouds Lookout Mountain, Tenn.
19-21	Southern Textile Association annual convention	Grove Park Inn Asheville, N. C.
Sept. 19-20	Textile Quality Control Association	Hotel Barringer Charlotte, N. C.
25-26	Northern Textile Association	Wentworth-by-the-Sea Portsmouth, N. H.
Oct. 6-10	Southern Textile Exposition	Greenville, S. C.
15-25	International Textile Machinery Exhibition	Belle Vue Manchester, England
30-Nov. 1	AATCC National Convention	Hotel Conrad Hilton Chicago, Ill.



THE PUMP THAT BEATS THE HIGH COST OF CORROSION!



"BUFFALO" TYPE "DS" RUBBER-LINED PUMP

If you pump corrosives or solutions containing abrasive solids, you'll save money with this "Buffalo" Pump. Rubber permanently bonded to the impeller and all liquid passages prevents the corrosion that could quickly put an ordinary metal pump out of action. Your savings in downtime and pump replacements quickly pay for the extra cost of the rubber lining.

And this "DS" pump design saves you in other ways, too. The efficient shrouded impeller does not depend on close running tolerances. It's non-clogging, which is why the "DS" is widely used in paper mill service, as well as in the chemical industries. It's just one of the broad line of "Buffalo" Centrifugal Pumps to move *your* liquids at the lowest possible cost over the longest possible period. Write for Bulletin 982 — *your* pump is in it!

SIMPLIFIED SERVICING

Is readily apparent in this photo. Upper half of the diagonally split-shell pump casing is quickly removed without disturbing discharge piping — exposing impeller, stuffing box and passages for easy inspection and servicing. Upper main bearing half, too, is readily removable. Note rugged pump and bearing stands, ample stuffing box and bearing oil reservoir, all contributing to durability and reliability on the job.

"Buffalo" PUMPS

BUFFALO PUMPS

Division of Buffalo Forge Co.
175 Mortimer Street • Buffalo, N. Y.
Canada Pumps, Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

secondhand was either too busy to listen to the worker's complaint, or he just shrugged it off as another one of "old man so-and-so's gripes."

While we do not believe in delaying too long in making an effort to give a worker an answer when a complaint is made, the secondhand should be sure that he has all of the facts and information concerning the complaint before doing so. He should check any written or unwritten rules which might apply. He should weigh the possible effect of his decision on other workers, both in his and other departments. If a contract is in effect, he should study it for possible clauses covering the situation.

If, when he has done all of these things, he feels that the decision is his to make, he should take the necessary steps to correct the situation causing the complaint. If, on the other hand, he feels that the overseer or the superintendent is the proper one to handle the complaint, then he should, of course, give all of the facts to the overseer, who can decide whether to attempt to settle the complaint himself, or to pass it on to some higher authority.

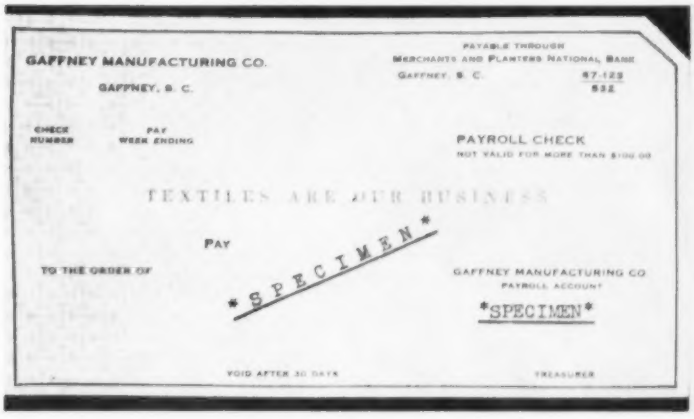
THE OVERSEER should see to it that his secondhands avail themselves of every opportunity to learn all that they can on the subject of employee relations. Leading textile magazines, such as TEXTILE INDUSTRIES, carry articles along this line. Many progressive mills have training courses in job relations—and in other subjects, as well—which are available to secondhands.

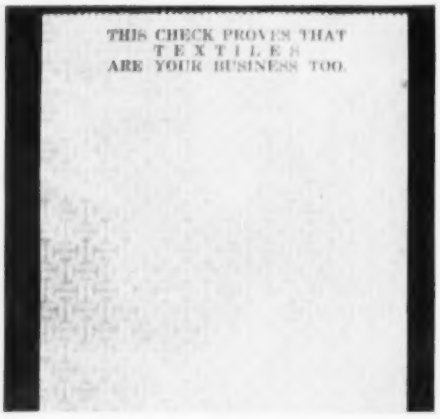
If the mill has a labor contract, the overseer should be sure that the secondhands understand its provisions. The overseer and his secondhands may not agree with all of the provisions of the contract, but so long as they are in effect, these provisions should be followed to the letter in attempting to settle disputes and complaints. Many grievances and arbitration cases could be avoided by a strict adherence to such a policy.

It is a wise secondhand who makes notes freely, keeping a record of the date, time of day, and other pertinent data concerning complaints, warnings, reprimands, accidents, etc. Such records may prove invaluable in arbitration cases. One's memory can often prove very unreliable, especially when one is being questioned by a smart lawyer or union official.

To sum up our discussion, we feel that greater recognition should be given to the secondhand, the link which connects the "chain of command" with the "chain of employees."

Here's a good public relations idea





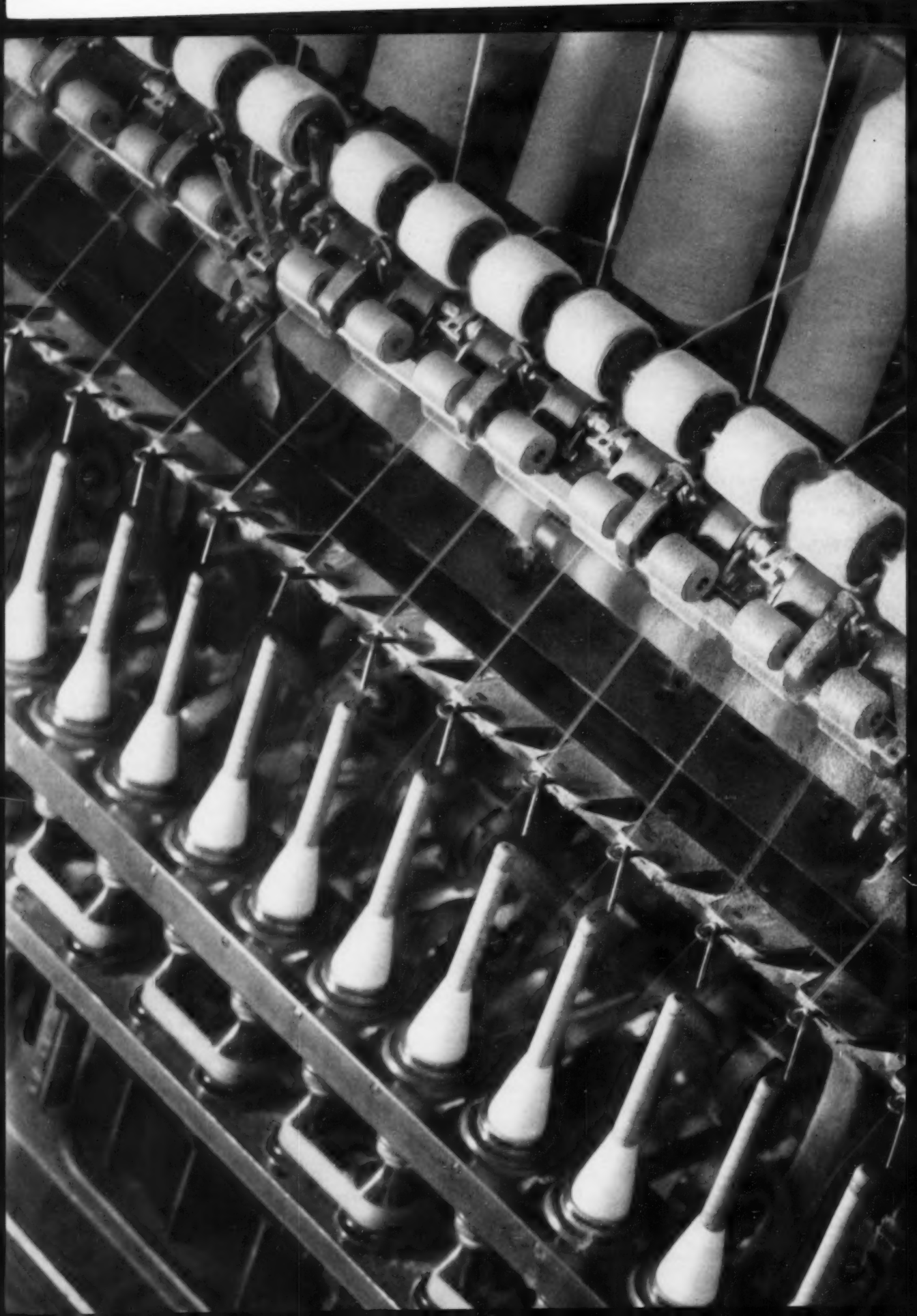
■ Do you have a feeling that the local merchants, bankers, professional men, and others do not fully appreciate how much your mill means to the community?

If you do, perhaps you should consider a public relations "gimmick" which is being used at Gaffney (S. C.) Mfg. Co.

Imprinted on the front of this mill's payroll checks in bold, red, capital letters are the words "TEXTILES ARE OUR BUSINESS." (See accompanying illustrations.) On the back above the space for endorsements is the statement "THIS CHECK PROVES THAT TEXTILES ARE YOUR BUSINESS TOO."

Consequently, whoever cashes a Gaffney Mfg. employee's check knows that the money he is about to receive is the direct result of the manufacture of textiles. Then when the citizen turns the check over to endorse it for deposit in the bank or to pay for merchandise, etc., he is politely reminded that he too should be concerned about the welfare of the textile industry.

Hats off to J. J. Norton, Jr., general manager, secretary and treasurer of the mill, for devising this check form!



RIGHT...

and proved right... for any frame or fiber- Armstrong Accotex Cots

No matter what you're spinning—natural fibers, synthetics, or blends—and no matter on what equipment, there's an Accotex® Cot specially compounded and proved right for the job.

These cots will help you spin stronger, more uniform yarn, and at the same time minimize such things as lapping, eyebrowing, and yarn irregularities.

For example, hundreds of mills have reduced front roll laps to a minimum by using J-490 Cots. J-490 Cots have a special built-in electrolyte that actually tends to repel loose ends.

On some frames, high static aggravates the lapping problem because most of the metal-to-metal contacts have been eliminated. In these cases, many mills are discovering that one of the new Armstrong anti-static compounds is the answer.

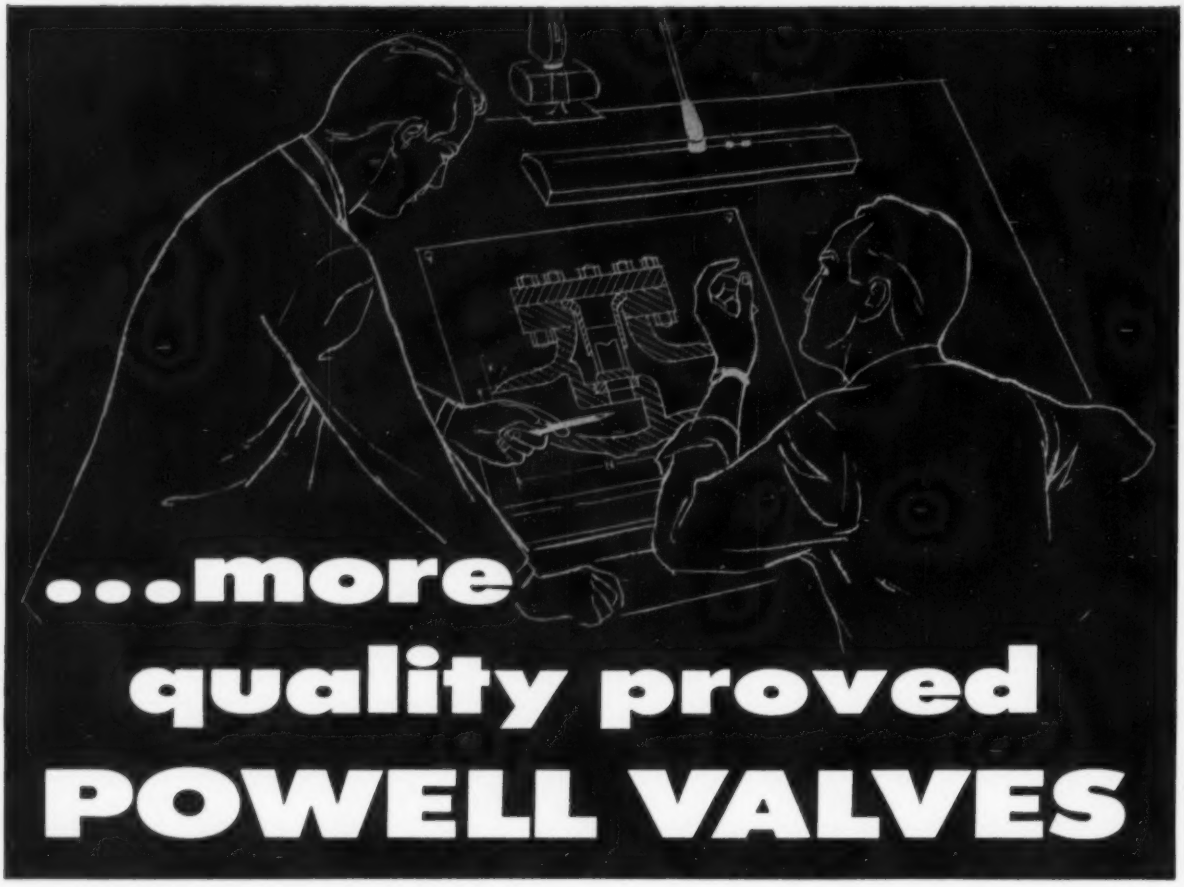
Where eyebrowing is a problem, the Accotex NC-762 Cot—an anti-static material—will usually control it. This new cot is also substantially reducing clearer waste in many mills.

When considering any change in roll covering, it's a good idea to talk things over with your Armstrong man. His practical training and experience can be of help in choosing the right roll cover for best performance in your spinning room. Armstrong Cork Company, Industrial Division, 6510 Ivy Street, Lancaster, Pennsylvania.

Armstrong ACCOTEX COTS

. . . used wherever performance counts

For more details on Accotex Roll Covers, or other Armstrong textile supplies, write for the booklet, "Armstrong Textile Products." It can help in selection and maintenance of Armstrong spinning and weave room supplies.



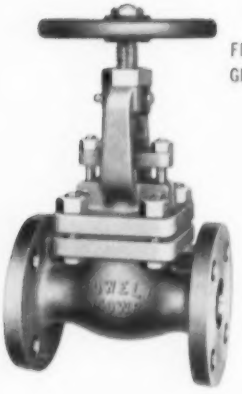
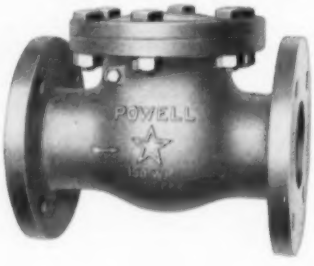


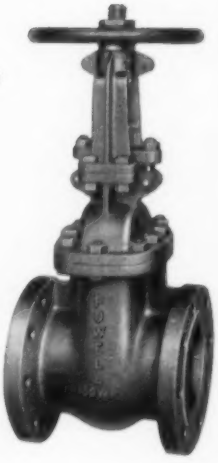
FIG. 2475—Stainless Steel O.S. & Y. Globe Valve for 150 Pounds W.P.

FIG. 2309 SW—150-Pound Flush Bottom Tank Valve with Powell Patented Seat Wiper.

FIG. 2456 SG—Large Stainless Steel Gate Valve for 150 Pounds W. P. Flanges conform to latest Standards.

FIG. 2433 SS—Large Stainless Steel Swing Check Valve for 150 Pounds W.P.

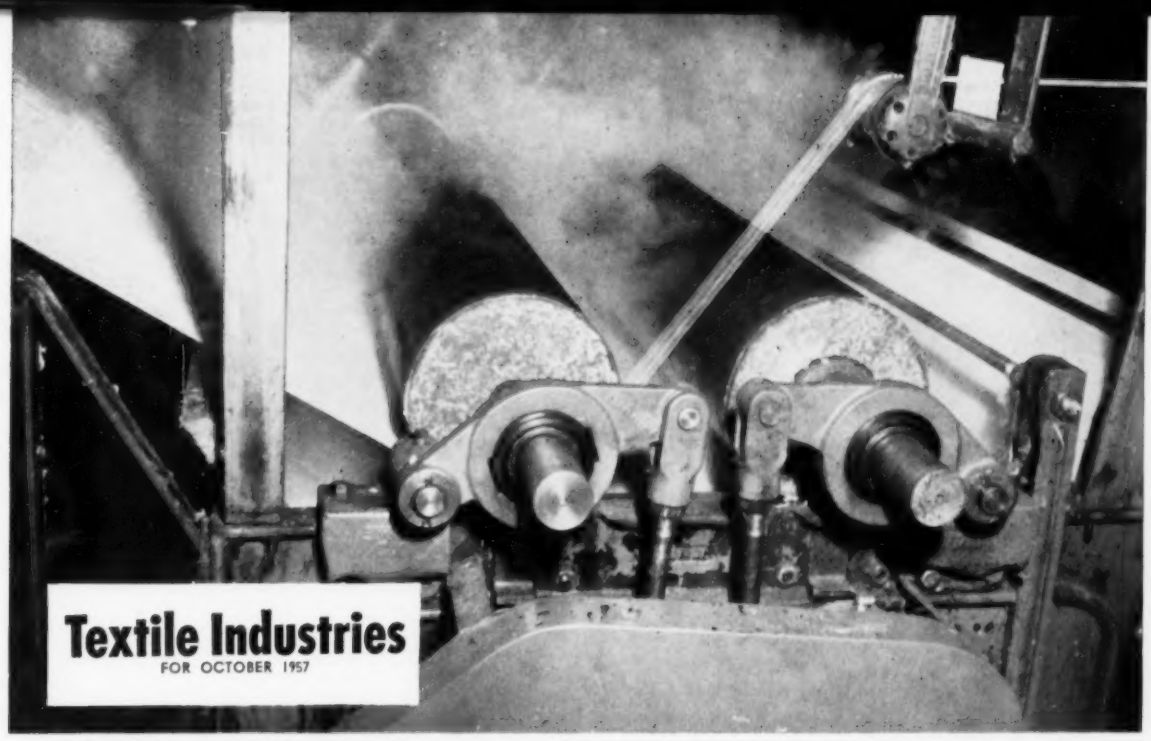




Designed for long life, designed for dependable service

Consult your Powell Valve distributor for all the facts about quality proved bronze, iron, steel and corrosion-resistant valves. No matter what the flow control problem, a Powell Valve can solve it . . . *better.*

THE WM. POWELL COMPANY, CINCINNATI 22, OHIO . . . 111th YEAR



The synthetic squeeze rolls, in service more than nine months, have required no maintenance and still give excellent results.

Staff prepared

Exclusive

Why sizing costs went down

and weaving efficiency went up in this progressive print cloth mill

CLINCHFIELD Manufacturing Co., Marion, N. C., produces 80 x 80 print cloth using 30s warp and 40s filling. Upon bringing one slasher room up to date, this modern and progressive mill operates the slashers at about 65% efficiency.

One slasher room was equipped with new Air-Dri slashers with mobile creels which save time in changing sets. These slashers are also equipped with multi-motor drives for positive control of moisture and tension. Stretch is held to about 1½% at slashing: 7½% (plus or minus ½%) moisture is left in the warps.

The speed and moisture controls are fully automatic. A Minneapolis-Honeywell Moist-o-Graph is used. Reliance motor controls are also used. Taylor instruments are employed on the new size cooking equipment which was installed for the new slashers.

The Air-Dri dryers produce uniform drying with minimum maintenance. Also, absence of excessive heat in the room has resulted in more comfortable working conditions. In short, the hot air dryer is cleaner, cooler, and requires less maintenance than other slashers operating in this mill.

The replacements were found necessary because the old equipment was not economical to operate. The two new slashers replaced three old ones with the attendant labor savings and savings on maintenance without any reduction in output.

The mobile creels on the new Air-Dri slashers have saved about 30 to 45 minutes in changing each set by permitting the operatives to prepare a new creel ready to be moved into place upon exhaustion of the one in running position on the slasher (photos on next page).

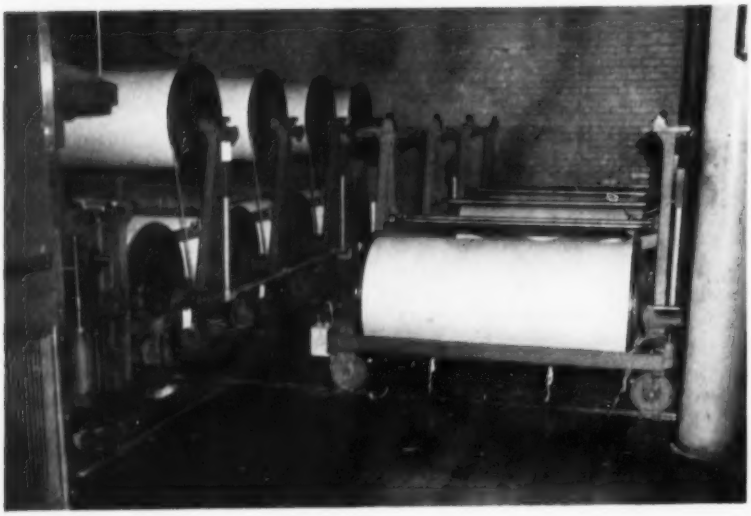
The exhausted creel is pushed aside on the rails provided for the purpose, and the new creel is pushed into place ready for slashing.

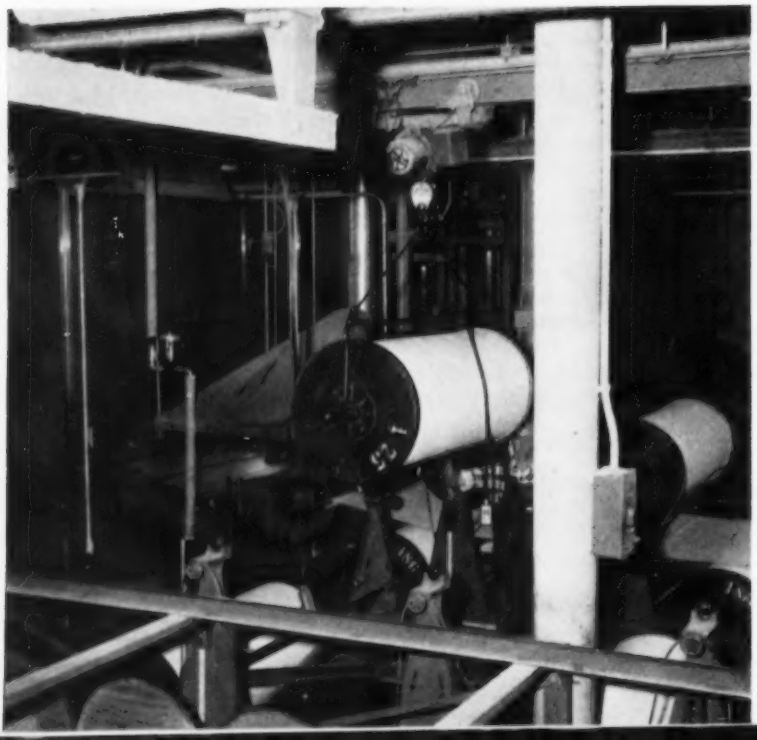
The operatives put new section beams in the exhausted creel when they have time. The mobile creels require more space between slashers, thereby increasing the amount of walking for operatives.

Conveyors Help. A beam conveyor from the spooler room (on the third floor) to the slasher room (first floor) brings full section beams to a rack provided for them in the slasher room.

This conveyor picks up an empty beam and returns it to the spooler room on each trip (see photos at top of page 95). A double-deck rack accommodates full beams on top and empty beams on the bottom.

When beams are stored on the mobile creels, they are handled less in that the extra creels serve as storage and are not needed be-





Mobile creels on Clinchfield's new slashers, three views of which are presented here, provide a saving of 30-45 minutes when it is necessary to change sets. Operatives load spare creels while others are running. Then when a set runs out, empty creel is rolled away and spare full creel moved into position for threading-up. Overhead hoist is used for placing full beams into creel (bottom photo).

tween sets anyway. Less handling has brought an improvement in quality, although the amount of improvement has not been clearly defined, according to a spokesman for the mill.

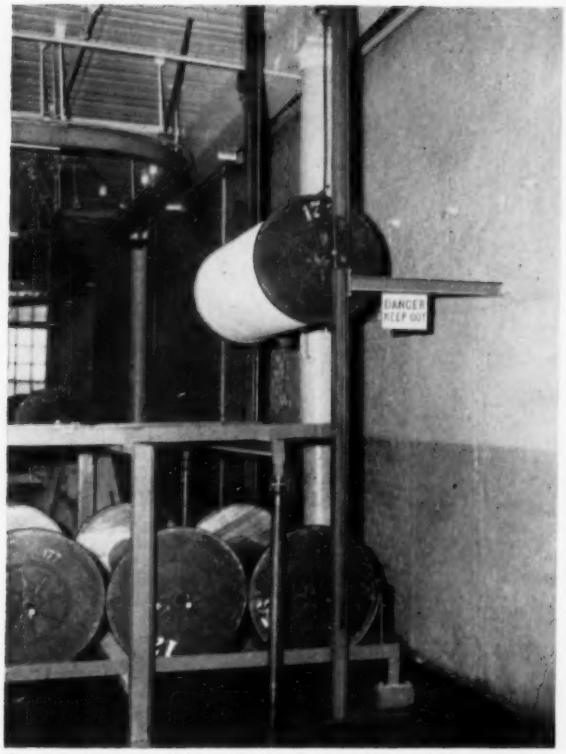
Operation. The system for loading and exchanging creels in this mill is as follows: An empty beam is removed from the creel by hoist on overhead rail. The empty beam is placed on storage rack, and a full beam is put into the magazine creel.

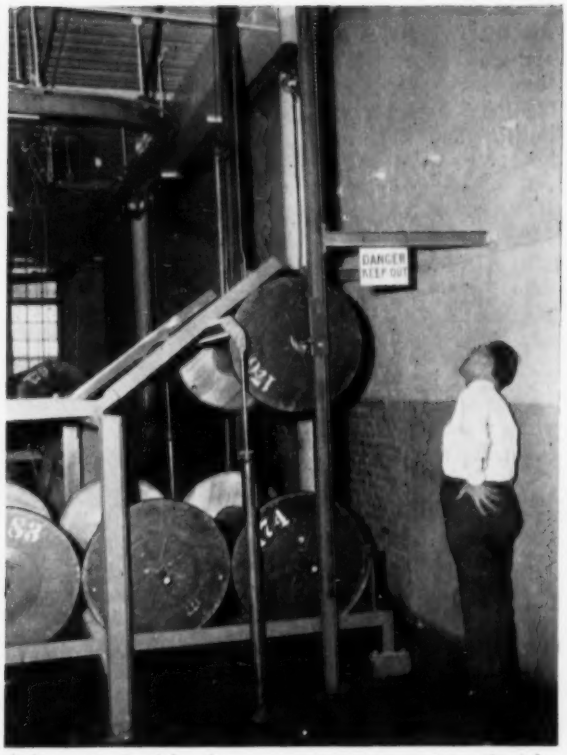
This procedure is repeated until all empty beams have been removed from the creel and replaced with full ones. Two men are required to creel, count ends, etc.

Squeeze Rolls. All four slashers in this mill are now equipped with Dayton synthetic squeeze rolls throughout—no blankets are used. The synthetic rolls used initially had to be buffed three times in one year because of blisters and other surface irregularities. The present Dayton rolls have been in service for more than nine months and have required no maintenance while producing excellent results.

Old Slashers. Two older model Saco-Lowell slashers (2-cylinder) in another slasher room were operated at about 45 ypm. Now 55 ypm is averaged since these were rebuilt and brought up to date. Additional drying capacity was secured by adding two 6" dia steel rolls located back of the big cylinder to hold the yarn in contact with the big cylinder over a greater portion of the surface. This simple change has proved well worthwhile and increased drying efficiency by 20% on these two old slashers without any reduction in quality.

Controlled tension features were also installed on the two-cylinder slashers which were reconditioned.



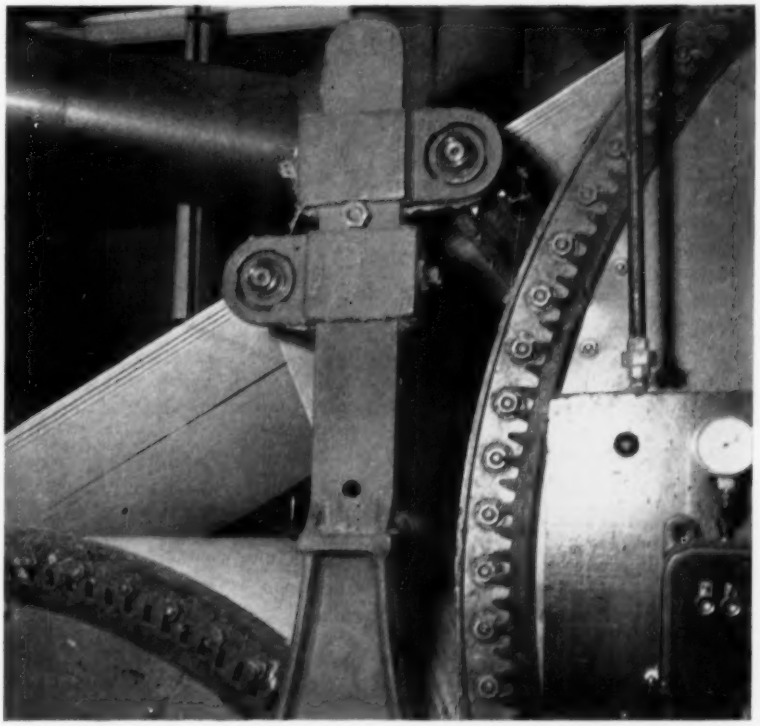


Conveyor lowers a full section beam from the third floor spooling and warping department to the section beam storage rack in the slasher room. In right photo, same conveyor on return trip takes empty beam to third floor.

The old slashers were rebuilt to include all new cooking and size storage equipment; new size boxes, recovered cylinders, multi-motor drives; M-H Moist-o-Graph; new large beam friction drive on front; new piping; and all worn parts were replaced, including installation of anti-friction bearings wherever practicable. All work was done by West Point Foundry and Machine Company.

Comparative Costs. Cost of modernizing the old equipment was about 65% of the total cost of new equipment installed here, and although the revamped slashers do a good job, a spokesman for the mill stated that this mill would buy all new equipment if the job were to be done again because of the obvious advantages observed in operation. Namely: cooler, cleaner operation with less maintenance anticipated on the Air-Dri machines.

Disadvantage of Creels. One possible disadvantage of the mobile creels was noted in that the additional distance required be-



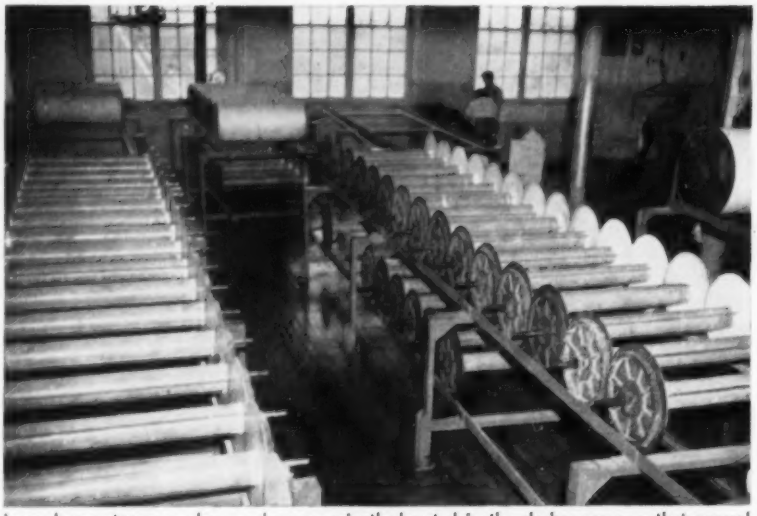
On the slashers not replaced by hot air units, increased drying capacity was obtained by adding two 6"-diameter steel rolls back of the big cylinder to hold the yarn in contact with a greater portion of the cylinder's drying surface.

tween slashers makes it necessary for the operatives to walk more and also prevents a close watch of the slashers while in operation. The new slashers have been in operation approximately two years now.

Other Advantages. 50% more looms were added to the No. 1 mill without any more slasher capacity required upon modernizing the two-cylinder slashers.

Weaving efficiency has improved as a direct result of improvements in slashing. Other improvements were made simultaneously, including new spinning.

This mill has found that the decrease in slashing costs and increase in weaving efficiency have more than justified the expenditure on slashing equipment.



Loom beam storage racks are also conveniently located in the slasher room so that manual handling of beams is reduced to a minimum. Note that the empty beam storage racks in the foreground slope down toward the windows where slasher head-ends are so that when one beam is removed another rolls into position. Full beam storage racks can be seen in front of the windows.

Must import more apparel wool for adequate stock level, Bureau says

■ Imports of apparel wool into the United States will have to be increased above the present annual rate if the January-May annual rate of mill consumption is to be maintained and stocks are not to be reduced to an impossible figure of 17 million pounds.

This conclusion, drawn from its August 1, 1957, resume' of commercial "Apparel Wool Stocks on April 1, 1957" just released by the Wool Bureau, Inc., is based on an analysis of reports from the U. S. Census Bureau, the U. S. Department of Agriculture, and other sources.

Total stocks declined 21 per cent between April 1, 1956 and April 1, 1957 when they were estimated at 115 million pounds, scoured basis, according to the Wool Bureau. In relation to the record of mill consumption for January through May, stocks represented approximately 22 weeks' consumption in 1957 compared with 24 weeks' consumption in 1956. Since only a small amount of the new clip is marketed by April 1, for all practical purposes it may be assumed that the entire 1957 clip of about 130 million pounds will be available during the remainder of 1957, the Bureau said.

Total supplies in sight on April 1 were therefore equal to 245 million pounds. However, at the January-May annual rate of mill consumption, 275 million pounds would be required, exclusive of inventories, or 30 million pounds in excess of supplies in sight.

Imports of apparel wool during January-March totaled 11.7 million pounds. If this rate should continue during the remainder of the year, resulting in total imports of 47 million pounds, the stock position at the year-end would be reduced to 17 million pounds. Since such a situation is manifestly impossible, the Bureau said, imports are likely to increase sharply during the second half of the year.

Domestic Wool Stocks. According to the Bureau, the situation with regard to domestic wool is as follows:

During the year, stocks of domestic wool declined 24% to a level of 80 million pounds, and stocks of foreign wool declined 15% to a level of 35 million pounds. The distribution of stocks between two groups, (1) manufacturers and topmakers and (2) dealers, is revealing of the growing importance of topmakers in domestic wool marketing noted in a recent U. S. Department of Agriculture report. While dealers' stocks declined 40% to 52 million pounds during the year, manufacturers' and topmakers' stocks increased 7% to 63 million pounds.

Grade Composition. The broad grade composition of stocks on April 1 corresponded very closely with the grade composition of mill consumption during the January-May period, the Bureau reported. Both domestic and foreign stocks of 60s and finer grades came fairly close to the 51% these grades represented in total mill consumption. Grades 50s up to 60s accounted for a moderately higher proportion of total domestic stocks than of mill consumption (39%), while they represented a moderately lower proportion of total foreign stocks. Grades 48s and coarser were over three times as important in foreign as in domestic stocks, but their combined importance in total stocks corresponded closely to the 10% this grade represented in mill consumption.

Executives retire, resign, or die; to replace them,

KENDALL BUILDS MANAGERS

by S. D. Chamberlain

Director of
Management Development
The Kendall Co.
Boston, Mass.

Exclusive

IN THE YEARS following World War II, The Kendall Co., like many another growth company, was confronted with a personnel problem that extended into all levels of management in its multiplant organization. The problem, essentially one of shortage, threatened to grow in seriousness as the company entered a period of expansion and growth.

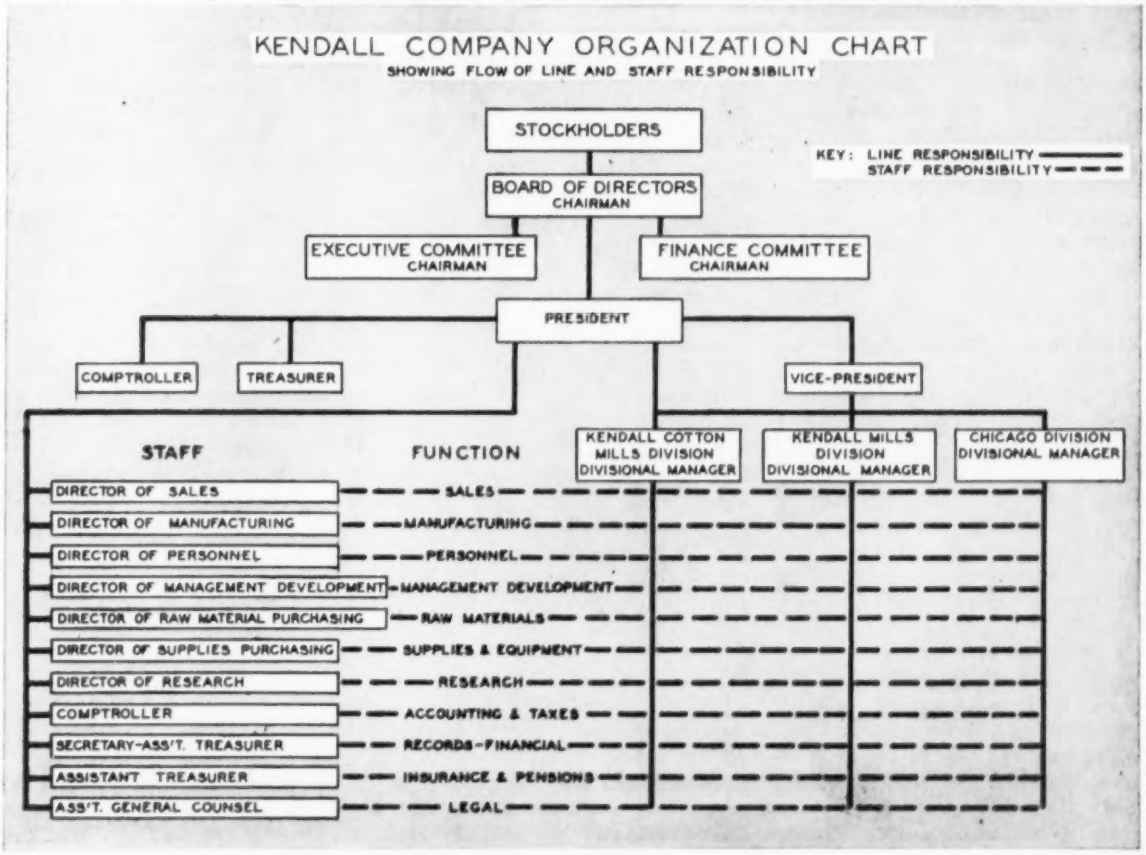
Of the factors that had combined to bring on the problem, the war was perhaps the chief contributing one. Large numbers of young men had been pressed into service to cause an interruption of their education and business training. Many of these men, now in their thirties, would normally have had sufficient training in the company to assume positions of responsibility.

Meanwhile a substantial number of management personnel, under whose guidance the younger men would have progressed, was approaching retirement, with many in fact having gone into retirement.

How best to insure an adequate supply of trained managers to meet the future needs of the company was the problem facing The Kendall Co. Recognizing it as one of major consequence, the president of the company believed that it was one of his major responsibilities, so in 1951-52 he began to seek assistance for himself in organizing and implementing a management development program for the company as a whole.

Historical Background: The Company Grows in Size and Complexity. To appreciate the magnitude of such an undertaking, it is necessary to look at the size, growth, and organizational structure of the company as outlined

The first step in the management development program is organization planning. This begins with the preparation of an organization chart, such as the one below, for all levels of the line organization of the company. The charts are revised regularly.



by the program's director in a report which also discussed its development.

The Kendall Co. serves as the parent of three divisions, with plants employing 8,000 people, located on a 1,000-mile triangle as follows: the Cotton Mill Division, headquarters at Charlotte, N. C., with eight weaving mills in the Carolinas; the Finishing Division, with headquarters at Walpole, Mass., and with five plants in New England; and the Surgical Dressings Division, Bauer & Black, whose headquarters are at Chicago, Ill., with three plants in that area and responsibility for other plants in Toronto, Cuba, and Mexico City.

Since 1903, when the company went into business, its sales have grown steadily, reaching a volume of $100,000,000 in 1953. Its chief products are Curity surgical dressings in the drugstore and hospital fields, Polyken industrial tapes, woven elastic stockings and supporters; and in the textile field, Curity diapers and nursery products, cheesecloth, dish towels, garment trade interlinings, Webril nonwoven fabrics, and milk filters.

In 1929, with the acquisition of Bauer & Black, a staff and line organization setup was instituted, under which the three divisions were rather strongly controlled by top management, but more on an individual basis than as a coordinated whole. The three Kendall divisions not only dealt individually with the public, but also with one another in an important way and in three different types of operations. Thus, any program with the goal of achieving company-wide coordination was complicated by these factors.

Yet it became clear as the business grew in size and complexity that more delegation of operating responsibility to the divisions was sound for future growth. This meant that there was a growing need for stronger top management coordination and guidance of the divisions. Accordingly, each of the three divisions was set up with a vice-president as general manager. In other words, the staff as an advisory management group could lighten the load on the president by initiating and developing coordination as counsellors to the divisions, while the president was also getting relief by more complete delegation of day-to-day operating responsibility to these divisional heads.

Executive Job "Specs"

I Does the man on the job or being considered for promotion have those personal qualities which set him above his fellows as a man of high moral character, a leader, a man who compels respect from those in all walks of life?

II Does the man possess the administrative ability to carry the responsibilities of this job? Fundamentally, good administration depends upon the selection, direction, coordination, and evaluation of those who comprise the management team. Can he do this effectively?

III Does he possess the overall intellectual qualities required for an understanding of the external factors influencing the business, as well as specialized knowledge of the business itself?

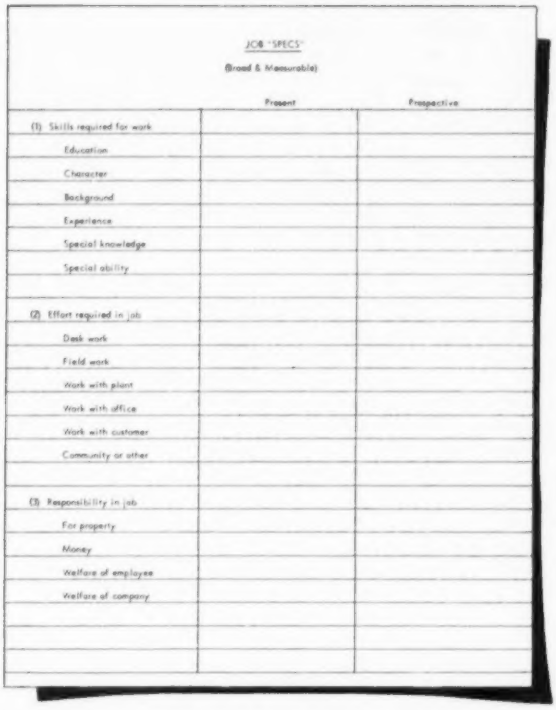
IV One final and indispensable characteristic must be considered. It might be described as the "connective tissue" between all the other attributes. Phrased concisely but inelegantly it is: Does he have guts? Will he fight for a principle, even when he knows he represents an unpopular point of view? Has he the guts to make the decision when he alone must decide?

Appointment of a Management Development Director. Following the president's decision to establish a program for the development of management material, he appointed a director of management development to the staff group reporting directly to him. He selected a divisional field sales manager, who had worked closely with two divisions and to some extent with the third; and had developed a keen interest and some know-how in personnel matters.

In broad outline, the director's assignment included coordination of company-wide recruiting activities as well as responsibility for coordinating the self-development programs for all managers from first line up — all this as the final operating responsibility of divisional line supervisors. This responsibility also included the appraisal of, and acting as a clearing house for, all educational and conference attendance (universities, A.M.A., etc.) on the part of all management personnel.

To put into practice as early as possible a management development program, the director attended the four weeks' American Management Association course and upon its conclusion set about making two surveys. One was to explore what was being done in the three divisions in terms of management development philosophy, techniques, use of tools, etc.; and the other was to contact firms with more or less established programs and learn from their various experiences, thus saving time and preventing errors in the program's development.

As to management development activities, the survey revealed a wide discrepancy among the three divisions, varying from "little" to "considerable" in the case of one division particularly. In some cases, there were no organization charts, in others, no job descriptions; in most cases no replacement charts existed and there were only spotty appraisal procedures. Yet the absence of the use of these tools did not mean neglect of "management development," for in an informal sort of way a great deal of development work has been done in accomplishing Kendall's favorably known management results. But the idea of organizing and formalizing management development procedures had been left to the initiative of individual department managers in each division, with resultant wide discrepancy in results.



JOB "SPECS"

(Broad & Measurable)

	Present	Prospective
(1) Skills required for work		
Education		
Character		
Background		
Experience		
Special knowledge		
Special ability		
(2) Effort required in job		
Desk work		
Field work		
Work with plant		
Work with office		
Work with customer		
Community or other		
(3) Responsibility in job		
For property		
Money		
Welfare of employee		
Welfare of company		

A job description is prepared for each position on the organization chart. It includes functional duties, responsibilities, and relationships in authority. Above is a "Job Specs" form which lists the kind of skills and effort required, and job responsibilities.

Personal Qualifications

List outstanding qualifications, either above or below average. If you think of replacement, how does he measure up to job in knowledge and ability?

What is his greatest strength?

What is his greatest weakness?

Potential

What is the next step for this individual and what further potential beyond that?

Action

Recommendations: What action for improvement such as training, study, change of job or pay.

When will it be done?

Check current status: Promotable, Questionable, Satisfactory on present job, Replace

Appraised by: 1. Date 2. Date 3. Date

From the job description form, specifications are prepared which describe the individual who would be ideally suited to handle the job. The above questionnaire is aimed at determining if a specific individual meets the standards which have been set up for the job.

One of the divisions, however, (with perhaps the simplest problems organization - wise) had delved further into management development than the others. It had developed organization charts, was in the process of completing a division manual of position guides, and formalizing appraisals it had been making in connection with replacement charts. And in addition, they had a well developed trainee job experience plan.

It was decided that this division was the "lighthouse" around which to build, and it became the "guinea pig."

With the completion of the surveys, a preliminary plan of approach was drawn up in midyear of 1953. At the outset, it was decided not to call the program an "executive development" program in order to avoid the "fair-haired boy" danger throughout the organization. It was felt that anyone in management should be eligible for the program. Accordingly, the program became officially known as the "management development program." It is interesting to note that not long after it began, a foreman was appointed who had come up through the ranks from office boy and machine operator.

Because of the diverse nature of divisional operations, each from the other, it was decided to work down through the divisional vice-president, with the divisions developing their own programs in applying the detailed use of tools and techniques. The primary step was to establish a common climate and philosophy of the acceptance of a need for management development in the company.

The Program Gets Underway. A trial run of the contemplated program, based on the findings of the two surveys and the American Management Association course, was given before the executive committee of the company. This was followed by a presentation to the key executives in the second and third echelons of each division at divisional headquarters.

This presentation outlined:

The highlights of the results of the surveys

The objectives of management development for the company

The philosophy running through the suggested steps

The recommended tools and their use, including suggested forms

The "booby traps" to watch out for

The charge of responsibility to line management in each division

Each manager in attendance was given a management development kit, which contained a restatement of objectives and a sample of each type of form suggested for company-wide use. Recognizing the danger of having the mechanics of the program obscure the real objective of management development, it was stressed then and repeatedly since that these tools in themselves do nothing to develop people.

Managers who had no job descriptions were asked to begin by writing their own and then moving down through their divisions. Those who had never made an ap-

praisal or followed it up with individual interviewing were urged to do it with one or two of their men. This, incidentally, proved to be a very effective ice breaker, as testified to by these men later on.

In introducing the program, deliberate simplicity was chosen as the starting note in order that its acceptance on a company-wide front would be more complete. So the whole program started right at the hub of Management Development, namely the *appraisal of the individual* and the follow-through of his own action in self-development. The possible risk in this approach was calculated, yet it worked out most satisfactorily.

It was felt that this coming to grips with the manager's responsibility of seeing that his men developed themselves to the greatest productivity on their present jobs could and would clearly point to the need for:

Knowing what each man's job is (job descriptions)

The requirements of the job (man "specs" and performance standards)

How each man was doing on his job, in the manager's mind and in the individual's? (appraisals and interviews)

What needed to be done about it (personal development training plans and follow-up)

It was to be understood that the process of appraisal was not a tool of discipline, but the vital point of understanding between the manager and the individual who sought development of his greatest potentials on his present job. It should approximate an annual stock-taking for both the individual and the manager. It was realized that the manager's handling of his appraisals of his staff was also a part of the appraisal of his own management ability by *his* superior.

It was recognized that the earlier and the better the appraisals were made, the quicker weak men were eliminated and the way made clearer for the stronger "potentials." Thus management could check whether it was getting back what personnel was being paid for.

Following the presentations and meetings with groups at various management levels, the director devoted the spring recruiting season in making a survey of college contacts. The survey, made with the company's eight or ten divisional "recruiters," covered an area extending from the Rockies to the Atlantic and included the Northeast, Southeast, and Midwest. Its purpose was to broaden sources for potential management material and to widen university staff contacts for all three divisions.

The Director's Role. While the development of management material was to be a line function and responsibility, the director of management development, as a management staff member, had a specific function to perform and responsibilities to carry out. As the program got under way these became more clearly defined.

As a staff member of management, he would be responsible to the president and associated with the director of personnel in providing functional service, advice, counsel, and recommendations, to the president, and to the divisions on management personnel recruiting, training, and development activities in The Kendall Co.

In counselling and rendering assistance to the line organization, the director prepared material (supplemented frequently since) which not only outlined the scope of the program but offered guidance in the application of tools and techniques.

Among the material presented to the line organization was a plan that aimed at the fulfillment of the program's two-fold purpose — continuous growth of the company and of the individual. This plan, to achieve its goal, should:

1. Identify the management jobs.
2. Define the activities and responsibilities thereof.
3. Spell out the type of individual who should be most effective in each job.
4. Check to see how present and available incumbents match up to these specifications.
5. Arrange to improve those men to be kept on the job; locate and train their successors if necessary, and provide for inevitable replacements in all positions.

The aim is therefore to get the qualified individual in the position where he can operate most effectively for the benefit of the company. This in turn should offer the individual the appropriate opportunity for self-development, at the same time integrating him properly into the regular operations of the business.

How Competent Is the Individual? In its design the plan was essentially a simple one. Yet it was to be expected that problems in certain areas should arise as it went into execution throughout the organization, for some members of management did not possess the necessary background and would have to acquire the experience in the utilization of its new techniques and tools. In their own experience, as they went up through the ranks, they had not perhaps relied or looked much to acknowledgement of their performance from above. To a large extent they had held to the concept that "No news is good news."

Therefore, it was not altogether unexpected when some of the executives requested assistance in the areas of appraisal and counselling after appraisal, particularly in the latter.

Much concentrated effort and study, then, were devoted to develop an appraisal procedure that would determine as accurately as possible an individual's competence and performance, upon which depended the design of a plan for his personal development.

In appraising an individual's work competence the "group discussion" technique was recommended, since it had proved successful in management development programs elsewhere. In a group discussion the immediate supervisor is responsible for the appraisal but seeks confirming advice from two others who also know the man — such as a senior line man and a third person of higher level than the individual, selected by him or by his supervisor.

In evaluating a man's competence a high degree of accuracy and fairness must prevail; and the discussion must be conducted along factual lines of investigation with

as complete objectivity as possible. The appraisers look at the consistency of his record, placing no undue emphasis on a "critical incident" favorable or unfavorable in his past. The appraisal, too, must detect the presence or absence of the specific, distinguishable ability factors that make the individual's performance strong or weak.

Counselling After Appraisal. As accurate and thorough as an appraisal may be, the counselling that follows requires an even greater amount of skill. It might well be considered one of management's greater responsibilities to the individual, since it affects his personal development and future in the company.

Counselling after appraisal is in effect a discussion with an individual about himself in which management gives due recognition to his performance and ability, simultaneously helping him see for himself the areas requiring improvement and what means are available to him for his development and ultimate advancement.

Such a discussion between an individual and his supervisor is held periodically at Kendall. And in order that it may prove of benefit to both company and individual it must be carefully planned beforehand. Essential data of the man's background and record must be compiled and provisions made to insure a sufficient amount of time and proper atmosphere for completeness of discussion.

To achieve this rather long-range objective a number of discussions may be required, in the course of which a strong relationship between the individual and his superior must be built up in order that both will be willing to talk frankly about the job, how it is being carried out, and what improvement is possible.

As a matter of fact, during such discussions the individual is encouraged to do most of the talking — to bring to the surface his opinions and feelings, achieving a clearer understanding of himself and his job, and in this way pointing to the plans for his self-improvement. This brings into play the "art of listening" on the part of the superior.

PERFORMANCE AND PROGRESS REVIEW

Name _____ Position _____ Date _____

Age _____ Years with Company _____ Years on present job _____

Performance

Results: What has this individual accomplished in measurable results since last appraisal? Consider quantity, quality, cost, time. Be specific, give facts and figures.

Methods: How does this person go about getting his job done--work with and through people, plan his work, handle his administrative work, skill and technique.

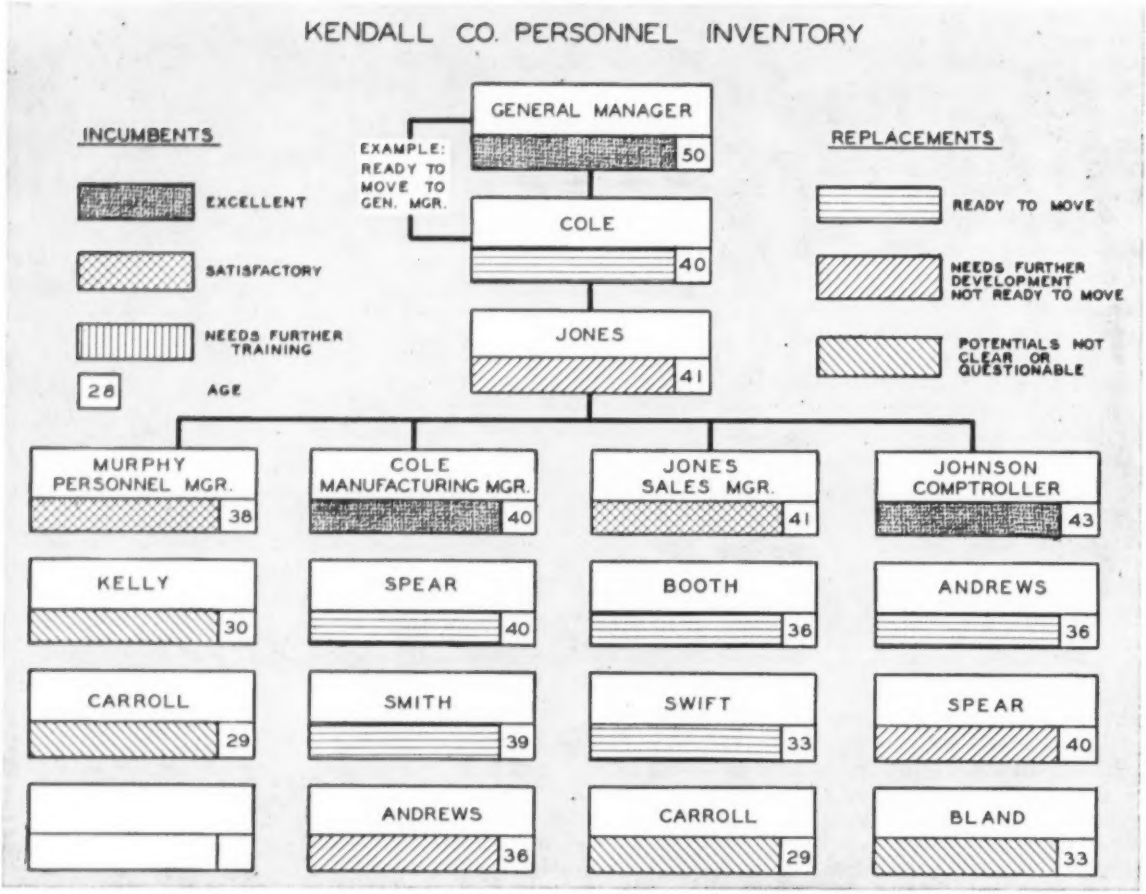
An individual's present work competence is appraised through group discussion and agreement by those who have the necessary facts. The above form records his performance and progress. When his potential in the company is determined, a training program is designed for his development. Training is "on the job," in company operations, and may include training outside the company.

To improve, however, an individual must realize his weaknesses as well as his strengths. Not every individual possesses the insight to examine his weaknesses. At best, his own study of his behaviour comes about slowly. It is, therefore, largely up to his superior to help him bring out his own weaknesses objectively and in such a manner that the resultant reaction is one of improved feelings and increased security. This involves the "art of questioning" on the superior's part.

Yet the discussion or discussions should not overlook a man's successes as well. The individual should have a clear picture of exactly how he stands in the company. Without this there is often a tendency for him to assume that he is either performing his job well or without success; and the resultant tendency may be one of indifference to both his job and to his own improvement. This indifference, if allowed to continue, can result in poor job performance and in time can cause the individual to seek employment elsewhere.

Perhaps the ideal goal, then, of a discussion or a series of discussions is that which enables the individual to view his performance — his strengths and shortcomings — objectively and by himself. This opens the door, so to speak, to self-development and growth.

While the majority of discus-



As individuals in each position are appraised, replacement charts such as the above hypothetical example are prepared. The charts show where vacancies may be expected in the organization, because of current weaknesses, prospective retirements, or expansion, and indicate the state of readiness of the possible replacements. The replacement charts are continually revised to keep them up to date.

sions may continue without incident, situations may arise in some of them which require special attention and handling. An individual may disagree with an appraisal, for example, and has evidence to show the appraisal inaccurate in some respects.

Where individuals are in contact with one another, each trying to accomplish his allotted part in a common endeavor it is to be expected that disagreements will occur. As a matter of fact, full agreement is not only impossible but unnecessary. Moreover, it is too much to expect people to have identical motivations, values, and outlooks. The supervisor, then, who is conducting a discussion with the individual must investigate a particular disagreement, assuming the responsibility for its eventual outcome; and if necessary, changing the appraisal in the light of new evidence.

There are other typical human reactions that may come about in the course of a discussion. The individual who is too eager for promotion or monetary rewards must be made to realize that performance in a highly successful fashion over a period of time is necessary in order to show a consistency of pattern upon which he can be judged.

The area of counselling after appraisal cannot be too readily generalized. It is an area in which management strives continually to achieve an understanding between itself and the individual, with a realization of the objectives and responsibilities of each, and to the ultimate benefit of both.

An individual who has the qualifications for advancement, along with the desire and necessary motivation, has a number of training programs available to him for the achievement of his goal.

His training may be "on the job," through counselling, coaching, and job-rotation. He may be given special assignments and participate in committee work, or his training may be in company operations, with enrollment in company courses and supervisory training programs, participation in staff meetings and management problem conferences, and the like.

Another form of training available to him is one outside his own company. This can include enrollment in university short courses and seminars, outside developed training programs, attendance at American Management Association conferences, and many others, designed to broaden his outlook and experience to help make him a "generalist" rather than merely a "specialist."

Goals Are Long-Range. The benefits of the management development program are at once apparent both to the individual and the company. The individual is given an opportunity to develop and advance and the company is assured of trained management material to meet its needs.

The attainment of the goals of a management development program are of necessity long range, with progess coming about slowly in a step-by-step manner along well considered lines.

Kendall's management development program, now entering its 4th year, is well along the way in attaining its broad objectives and benefits have already been derived from it. A general acceptance of the need for management development has long been established on a company-wide basis and all divisions are actively at work in implementing programs for their own situations.

All divisions are on a semiannual report basis to the president on personnel replacement charts; two divisions have established management development committees that meet regularly to review their programs; and the three divisions have a complete, up-to-date manual of the first, second, and third echelons of position guides.

There is an improved job experience trainee program under way in all divisions; with some significant job shifts already having been made from one function to another, including sideways shifts to remove road blocks.

Job appraisals are being made in all divisions with a gradual extension into all echelons.

An infrequent mailing procedure of selected management development material has been set up to forward pertinent information, particularly in areas such as "counselling after appraisal" that have required a greater amount of attention.

In regard to self-development, a coordinated program of exposure to outside ideas and experiences has been in effect with careful selection of attendance by managers at American Management Association seminars, university management courses, and other programs in all sections of the country and in all major functional areas of business activities.

In citing some of the progress and results of the management development program, it is perhaps of much interest to include some of the findings and observations of Kendall's personnel recruiting activities.

It is a well-recognized fact that industry has come to rely upon the college and the university as a chief source of potential management material. As the supply of this educated talent is inadequate to meet industry's current and foreseeable future needs, the competition among companies — and among industries — for this source of raw material has become greatly intensified.

In this competition, the textile industry as a whole has failed to a large extent in putting its best foot forward in presenting the college senior with an accurate picture of its changing, more attractive side.

In reality, the textile industry has been undergoing a period of technological change — a condition that will undoubtedly continue — and it rightfully belongs alongside other industries such as chemicals, plastics, and electronics, usually regarded as more glamorous and more promising by another college senior, perhaps than the one attending a textile college.

The Kendall Co. has long been aware of the potential impact of scientific progress, and today its many products of commercial acceptance include those resulting from many years of research and development. As a matter of fact, Kendall has an established research program, apart from various applied research programs within its organization, that is strictly of a long-range fundamental nature.

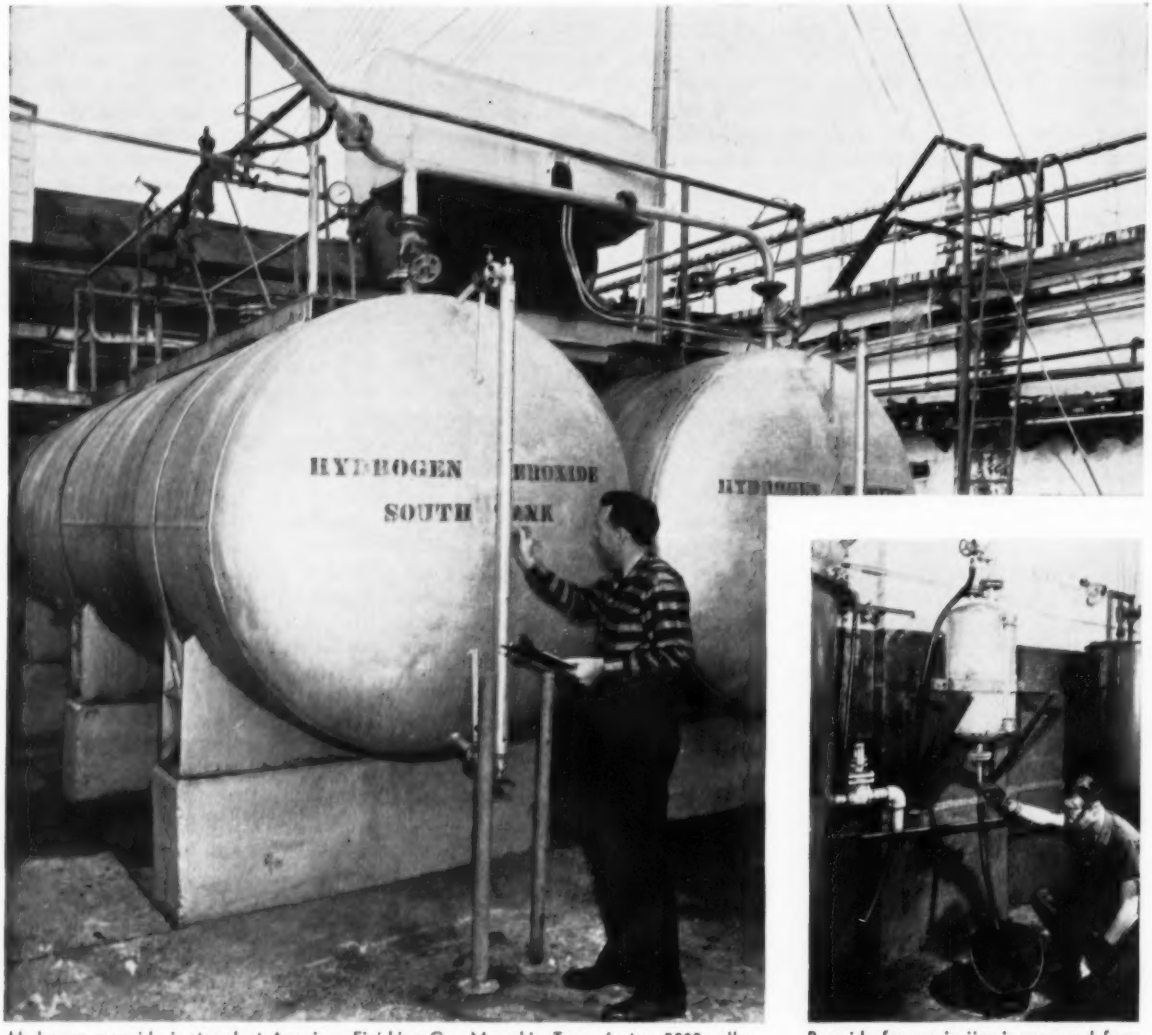
The college senior — the textile major particularly — looking at Kendall as a prospective employer is presented with opportunities in research, manufacturing, and sales — not to mention others in purchasing, accounting, and so on — equal to those in any other industry. Frequently, the applicant finds after adequate investigation and discussion that Kendall with its wide field of activities is the kind of company he has been seeking.

But whether the Kendall employee is a raw recruit fresh off the campus or one with a number of years already behind him, the management development program removes many of the risks involved in his attaining higher rank. For he participates in a carefully-laid pattern of development through apprenticeships, training programs, job rotations, and the like, designed to place him in the position for which he is best suited.

Specifications for auto seat cover fabrics

■ To promote a better understanding between users and producers of monofilament fabrics for automobiles and outdoor furniture, The National Federation of Textiles, Inc., recently published specifications for finished paper fiber fabrics, finished woven saran fabrics, and finished colored rayon fabrics.

According to Miss Irene Blunt, executive director, the specifications were adopted after many months of earnest effort by an industry committee of the Monofilament Automotive and Outdoor Furniture Fabric Weavers Group of the Federation. In a letter to users of these fabrics Miss Blunt said: "We hope and believe that use of these specifications will facilitate your purchases of these fabrics and will mark the beginning of improved relationships among all those concerned with the production of what has now become a staple material. In the absence of any contrary provisions in an individual contract, the specifications listed will govern both the placing of orders and the use of the fabrics thereafter."



Hydrogen peroxide is stored at American Finishing Co., Memphis, Tenn., in two 5000-gallon aluminum tanks. Aluminum pipe lines carry it to the point of use within the plant.

Peroxide for use in jigs is measured from small tanks on production floor.

H_2O_2 for oxidizing vats

How to use peroxygen chemicals for oxidizing vat dyes on cottons and synthetics

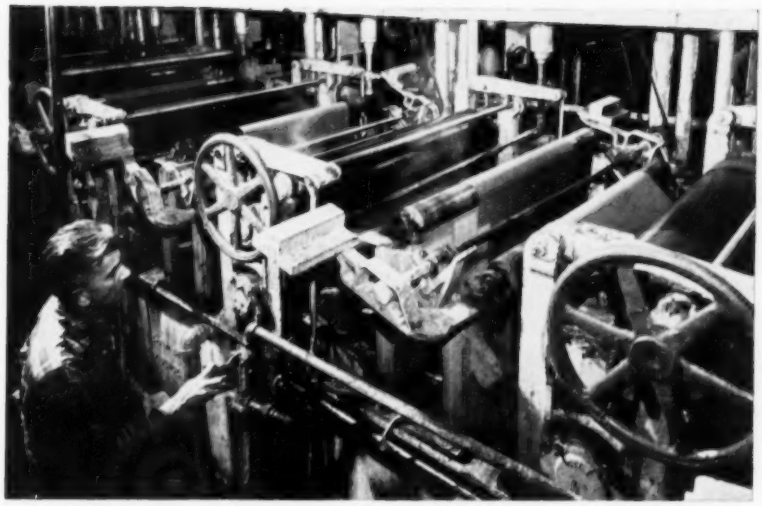
Exclusive*

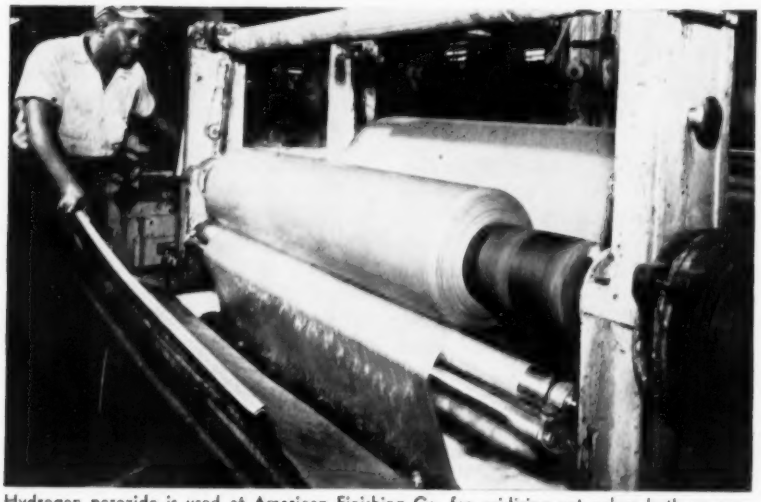
THE USE of hydrogen peroxide to oxidize vat dyes on cottons and synthetics is a well-established procedure in many dye houses. The process is attractive for several reasons:

1. Bright and clear shades are obtained.
2. Residual chemicals are easily and completely removed.
3. The hydrogen peroxide solutions are convenient and simple to use.
4. Equipment is easy to keep clean.
5. The goods are left in excellent condition for finishing, napping, or the Sanforized process.

Hydrogen peroxide is equally suitable for developing piece goods dyeings on jigs or continuous machines, yarn dyeings on any of the commonly used package-type machines, or raw stock dyeings. The dye oxidation principle is the same in all of these cases, although the method of applying the

*Contributed by Textile Research and Development Department, Becco Chemical Division, Food Machinery and Chemical Corp., Buffalo, N. Y.





Hydrogen peroxide is used at American Finishing Co. for oxidizing vat colors both on continuous dyeing machines (top photo), and on jig dyeing machines as in bottom photograph.

peroxide will vary according to the type of goods and the machine employed.

For most applications, hydrogen peroxide of 35% concentration is used to give satisfactory results.

Sodium perborate may be used in place of hydrogen peroxide, if desired, by a slight modification of the procedure.

PROCEDURES

General Procedure. In most cases, satisfactory dye oxidation will be obtained by the use of 0.5 to 1% of hydrogen peroxide (in 35% concentration), based on the weight of the goods. However, the total amount of dye to be oxidized has to be considered, and heavy dyeings with high percentages of dyestuff may require increased amounts of hydrogen peroxide for satisfactory oxidation.

To secure optimum results, the alkalinity of the oxidizing solution during the passage of the goods through the bath should be adjusted to a pH of 7 to 9. Bath pH may be adjusted with acetic acid, the quantity of acid depending on the alkali carry-over from preceding dyeing operations. Bath temperature should be held between about 130 and 160 F, the higher temperature being better suited for working in continuous dyeing ranges.

On continuous dyeing ranges it is customary to feed the chemicals in solution from mix tanks to their respective working compartments at a rate which will maintain bath concentration and bath level in the compartment. The mix tank solution is usually made up at about three to five times the required bath concentration to permit a feed rate sufficient to maintain the desired bath level. Before starting a run, each compartment is filled with the respective bath at its proper concentration, the mix tank serving only to maintain the bath in working condition.

A typical mix tank make-up permitting a fairly low feed rate to the dyeing range is made up to contain 35 lb of hydrogen peroxide 35% and 35 lb of acetic acid 56% per 100 gallons of solution. To the proper unit of the range, which usually will hold about 40 gallons of solution, is added the required amount of water containing 3.5 lb of hydrogen peroxide 35% and 3.5 lb of acetic acid 56%.

As the goods start to move through the unit, the feed from the mix tank is adjusted to deliver one gallon per minute. If, for example, three-yard goods are being run at 100 yards per minute, this feed rate will maintain in the oxidizing compartment the required concentration of about 1% hydrogen peroxide 35%, assuming proper functioning of the nip rolls at both ends to prevent excessive liquor carry-over.

The following typical procedures have been found satisfactory in plant use, but may require modification to fit specific plant conditions:

Dye Oxidation on Continuous Ranges. The oxidizing compartment of the range is filled with water to the proper level, and hydrogen peroxide 35% and acetic acid 56% are added in amounts that will produce a bath of 1% of each of these chemicals on a volume basis.

A feed tank mix is made up containing 3.25 lb of hydrogen peroxide 35% and 3 lb of acetic acid 56% per 100 gallons of solution. This solution is fed to the

oxidizing compartment at a rate of about 10 gallons per minute. Thus, with the range running at 100 yards per minute, an hour's production of 6000 yards will consume about 18 to 19 lb of hydrogen peroxide 35%.

This procedure has been found to be generally satisfactory, although certain dyeings, particularly on heavier goods, may require a higher concentration of hydrogen peroxide as well as of acetic acid, and may also require the goods to be passed through a second compartment containing the same solution.

The bath temperature is maintained at 140 to 160 F, depending on the prevailing dyehouse practice.

It is also possible to combine oxidizing and soaping operations. In this way an additional compartment is made available for rinsing. Moreover, this procedure permits satisfactory results to be obtained with as little as 0.5% of hydrogen peroxide 35% based on the weight of the goods. For the combined operations, the oxidizing compartment of the range is filled with a soap solution containing hydrogen peroxide 35% in an amount sufficient to result in a 0.5 to 0.75% bath concentration. No acetic acid is used in this case.

A feed tank mix is made up containing 3.5 lb of hydrogen peroxide 35% per 100 gallons of solution, but no acid. This solution is fed to the oxidizing compartment at a rate of only five to eight gallons per minute, resulting in the application of 0.5% to 0.75% of hydrogen peroxide 35% to the weight of goods passing through the range.

The customary soap bath temperatures are suitable for this procedure.

Dye Oxidation on the Jig. After dropping the dye bath, the cloth is given two rinses of two ends each at 130 F. A fresh bath is then made up using one quart of hydrogen peroxide 35% per 50 gallons of water. Acetic acid 56% may be added in amounts sufficient to adjust the pH of the bath, if this should be found to be higher than the preferred range of pH 7 to 9.

One end is run through at 130 F, and then another quart of hydrogen peroxide 35% is added to the bath. If necessary, for further pH adjustment, acetic acid may again be added. One end is run through again at 130 F, and then the bath is dropped. The cloth is then given a final rinse by running three ends in warm running water and then shelling through cold water.

Soap may be added to the oxidizing bath after the second end has been run. Before adding the soap, the bath should be tested with a suitable pH indicator to make sure that it is well above pH 7, so that the soap will not be precipitated. The bath is then brought to a boil. After running two ends in this bath, it is dropped and the cloth given a final rinse by running three ends in warm running water and shelling through cold water.

Dye Oxidation in Package Machines—Yarn. Approximately 450 lb of yarn are dyed in an Obermaier-type package machine. After an adequate rinse, three lb of hydrogen peroxide 35% are added to enough water to properly run the machine, thus applying approximately 0.6% of hydrogen peroxide 35% to the weight of goods in the machine. The bath is run cold for 5 minutes, then raised to 130 F and run at this temperature for another 10 minutes.

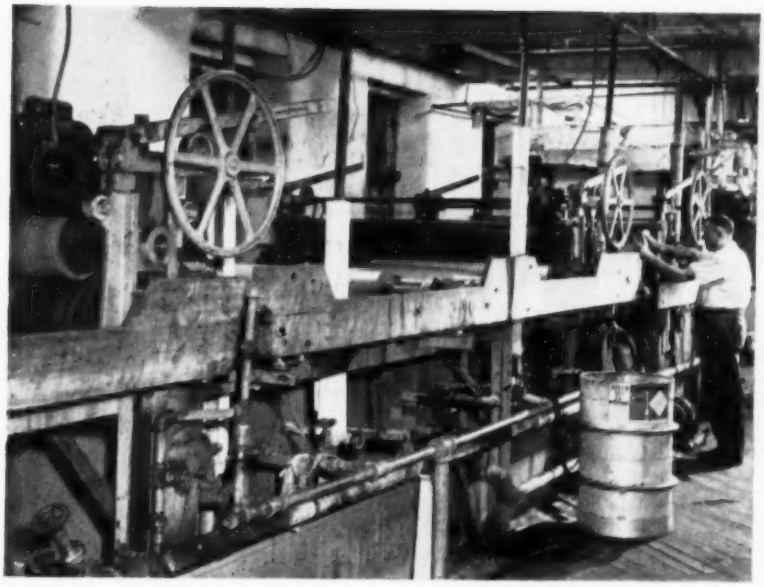
The machine is run "inside-out" all the time except for the last two minutes when the machine is run "outside-in." This flow reversal helps to remove any sediment which might have collected on the inside of the packages. The usual rinses and soap bath follow.

Alternatively, the oxidizing bath made up as just described may be started cold and run for 20 minutes "inside-out" during which time the temperature is slowly raised to about 125 F. Thereafter the yarn is rinsed, soaped, and rinsed again in the customary manner.

Dye Oxidation in Package Machines—Raw Stock. A load of about 500 lb is dyed and washed in a raw stock machine. An oxidizing bath is made up using three lb of hydrogen peroxide 35%, which is equivalent to about 0.6% on the weight of the goods, in a total volume of water adjusted to give a 1:8 liquor ratio. The bath is brought up to 130 F and run for 15 minutes.

Another procedure which gives excellent results is a combined bleaching and dye oxidizing operation, sometimes referred to as an oxidation and "clean-up" for the stock. For this procedure, a load of about 1000 to 1200 lb of stock

Ahern Textile Print, Inc., Norwich, Conn., is said to be the largest screen printing drapery plant in the United States. Vat colors are oxidized by the use of hydrogen peroxide.



At Ahern Textile Print, Inc., hydrogen peroxide is stored in drums, as received, until needed. Necessary quantity is drawn off into buckets for addition to the continuous range.

is dyed and washed down as usual. To an amount of water sufficient to give a 1:8 liquor ratio are then added 25 lb of hydrogen peroxide 35% (approx. 2.5% on the weight of the goods) and 24 lb of sodium silicate 42° Be' (approx. 2.4% on the weight of the goods). The bath is brought up to 180 F and is run for a total of one hour. The usual rinsing operations then follow.

EQUIPMENT

The machines and other equipment commonly used in dyeing are usually satisfactory for developing dyeings by the hydrogen peroxide process. However, hydrogen peroxide suffers decomposition in contact with certain metals and care must be taken that no fittings or machine parts made of iron, copper, brass, or bronze are present. Stainless steel equipment is the most satisfactory, and this is also recommended for dippers and other measuring devices. High-purity aluminum may be used for handling the hydrogen peroxide proper. Wooden jigs will also give good service.

Hydrogen peroxide may be stored in its shipping containers as received. The use of carboy or drum rockers to withdraw the hydrogen peroxide from the container is recommended. It may also be withdrawn by means of vacuum, using a suction pipe made of high-purity aluminum or glass. It should never be forced out of the container by applying air pressure, because this may cause the container to burst.

When the peroxide is supplied in tank-car quantities, proper storage tanks and unloading devices are necessary.

Mill Report—I:

DYE OXIDATION AT AMERICAN FINISHING CO.

American Finishing Co., Memphis, Tenn., uses hydrogen peroxide not only for bleaching but also for the oxidation of many dyestuffs, particularly on heavy cotton fabrics.

According to Charles H. Tapp, vice-president and general superintendent, the company obtains brighter shades and a softer hand by the use of peroxide dye oxidation than by any other method. Brighter shades are obtained from vat dyes of both dark and pastel colors with equal effectiveness. In addition, the cloth is left free of the metallic residues which are often left after chrome oxidation. This cleanliness and freedom from residues is especially desirable when subsequent finishes, particularly resins, must be applied. It also enhances cloth sewability.

American Finishing Co. treats from 500,000 to 750,000 yards a week, with a wide range of cotton constructions represented, from light print cloth of 7.15 yards to the pound up to 20-ounce duck. Speed of processing runs from 50 to 150 yards per minute.

To oxidize vat dyes on the continuous bleaching range, concentrations of about 0.25 ounces of hydrogen peroxide 35% to the gallon of solution are used, with the bath maintained at a temperature of 140 F. Mr. Tapp reports that his company has found that the speed of reaction cannot be materially increased by increasing the concentration or the temperature within practical limits above these conditions.

The speed of reaction naturally depends upon the pH of the oxidizing solution, and American Finishing Co. has found that faster reaction is obtained when the solution is on the alkaline side than when it is on the acid side.

When dyes which are difficult to oxidize are being used, the company has found it advantageous to feed the peroxide into the oxidizing bath without adding acid, letting the normal carryover of alkali maintain the pH at a level suitable for rapid oxidation. Excess alkali is then removed by adding acid to the detergent in the soaping bath.

Peroxide oxidation is even more efficient when carried out on jigs than on the continuous machines.

Only in rare instances does the company combine the dye oxidation with the soaping operation. The two operations are combined when certain dyes that oxidize easily are being used and where soaping is not a critical factor in the cleanliness of the end-product.

Ease of handling and over-all production economy are other advantages which are obtained by the use of hydrogen peroxide oxidation.

American Finishing has installed

two large 5000-gallon pure (99%) aluminum storage tanks for hydrogen peroxide and from these, aluminum pipes lead to suitable smaller storage tanks on mixing platforms and in the drug room. As a result, the company has realized a considerable saving in handling time and labor. Moreover, less labor is required in the drug room, less time is involved in preparing the oxidizing bath with hydrogen peroxide than with other oxidizing agents, and less time is taken up in soaping operations following the dye oxidation.

As few flanged joints as possible are used in the peroxide transmission lines, and polyethylene gaskets are installed wherever such joints occur. Type 316 stainless steel valves, with Teflon-impregnated asbestos packing, are installed in the lines. Air pressure is used to maintain a steady rate of flow.

Mill Report—II:

DYE OXIDATION AT AHERN TEXTILE PRINT, INC.*

Ahern Textile Print, Inc., said to be the largest screen printing drapery plant in the United States, carries out the complete processing of high quality fabrics of cotton, linen, acetate, and other man-made fibers, in a modern 150,000-sq ft plant to which it moved in 1937.

Ahern recently switched from the use of a mixture of hydrogen peroxide and sodium perborate and now uses peroxide exclusively for the oxidation and fixing of vat dyes in its screen-printed fabrics. (The company already used peroxide for its bleaching operations.)

The change was made because Ahern has found that peroxide oxidation brings about fuller development of the colors, gives maximum color brightness and fullness of shade, and produces goods with a better "hand" for subsequent finishing operations. More complete oxidation of the dyestuffs and freedom from metallic residues are said to be further advantages of peroxide oxidation over other methods.

Color reduction, dye oxidation, soaping, and drying are combined in one continuous operation at Ahern, which means that rehandling of the material is eliminated and production costs are reduced. This permits the company to achieve the maximum level of production from its capacity.

After the goods have been screen-printed, they are steamed to reduce the color, then passed through a bath of cold water, and into the oxidizing bath. For this, Ahern uses hydrogen peroxide 35% in a concentration of about 0.25 ounces to one gallon of solution. The bath must be maintained at a temperature of 123 F. The goods remain in the oxidizing bath only 30 seconds, and then pass into a soaping bath which is kept as hot as possible (about 180 F). From here they go into a cold-water rinse, and then are mangled between rubber-covered brass rollers and dried.

Speed of processing is regulated to give exactly the right length of time in the oxidizing bath, which at Aherns means a rate of 1200 yards per hour.

Fabrics processed by Ahern range from 80 x 92 sheeting up to light ducks (4 to 6 oz), as well as linen and mohair.

The hydrogen peroxide (35% concentration) is stored in the aluminum shipping drums as received, until it is required for use in processing. Then the quantity needed is drawn off by a hose into a galvanized pail and poured into the stainless-steel oxidizing bath compartment of the range.

*Source: John W. Durnan, general manager.

World textile trade conference results viewed with optimism

■ In response to an invitation from the International Federation of Cotton and Allied Textile Industries, the American Cotton Manufacturers Institute sent a seven-man delegation to Venice, Italy, last month to discuss at a world conference of textile industry leaders the U. S. position in world trade.

"Although the Institute is not a member of this international group," said L. G. Hardman, Jr., ACMI president and head of the delegation, "our directors were gratified to receive an invitation to participate actively in this conference. We commend the Federation's desire to make a thorough study of the present state and future prospects of world trade in the field of textiles. Such a study is sorely needed at this time. . . "

W. J. Erwin, president of Dan River Mills, Inc., chairman of the Institute's Foreign Trade Committee, and also a delegate, said that he was confident the conference would be highly productive of ideas on how the consumption of textiles can be linked closer to the population growth of the world. He added:

"We in the textile industry here are acutely aware of the tensions and problems arising from world trade; we realize fully that a deeper and better understanding of the difficulties of one another is necessary, and we are pleased to have this opportunity to participate in this conference."

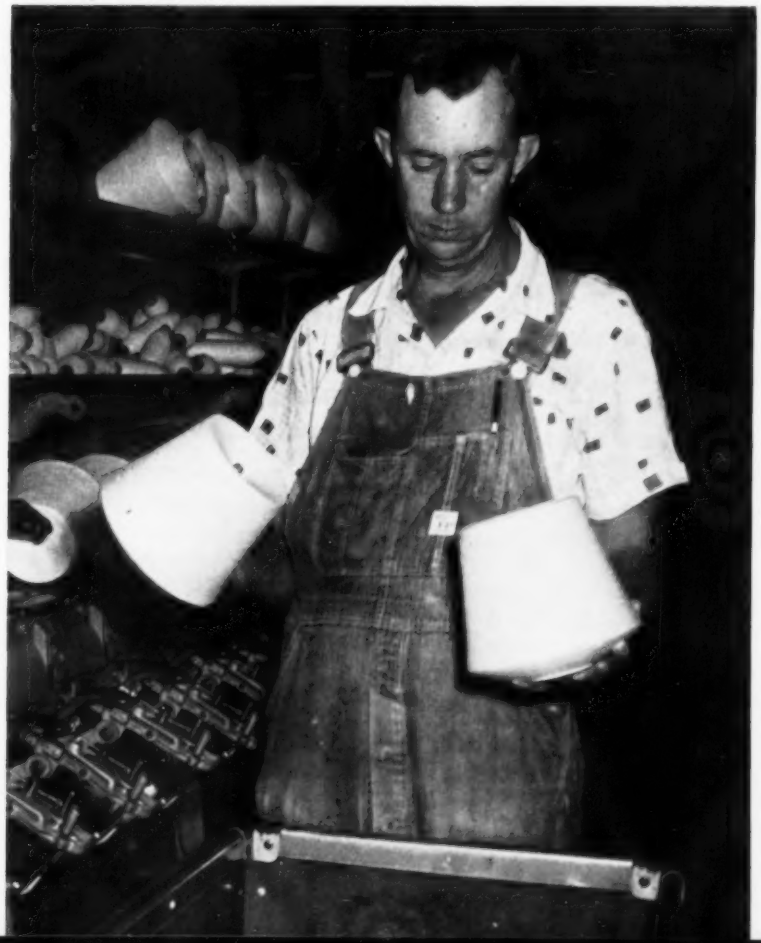
Other members of the delegation were: Malcom G. Chace, Jr., chairman of Berkshire Hathaway, Inc., Providence, R. I.; F. E. Grier, president of Abney Mills, Greenwood, S. C., and chairman of the board of Erwin Mills, Inc., Durham, N. C.; R. Houston Jewell, vice-president of Crystal Springs Bleachery, Inc., Chickamauga, Ga.; J. Craig Smith, president of Avondale Mills, Sylacauga, Ala.; Robert C. Jackson, executive vice-president of the Institute, Washington, D. C.; and John W. Murray, secretary of the Textile Export Association, New York City.

The "little" causes of yarn variation get their share of attention, as Dorothy Wadsworth and Howard Hindman are here doing in restoring a top front roll to good working order.

A cash incentive for fixers and a detailed checking system help Sycamore

Keep Quality Up

Buck Blanchard makes the first yarn inspection as he removes the cones from the winder. The packages are placed in a position on top of the winder to correspond to the spindle on which they were wound.



Staff prepared
Exclusive

In the September, 1956, issue of TEXTILE INDUSTRIES *(pp. 107-109) the incentive system for card grinders and fixers in the Sycamore plant of Avondale Mills was described. This article begins with the drawing process, and describes the responsibilities of everyone involved with the yarn processes through shipping. The section men are eligible for a cash award—all others are scored to arouse a competitive spirit.*

THERE are 18 combers divided equally among the three section men (one man per shift). Each man is free to maintain his own equipment in keeping with the system of "unit responsibility." Breakdowns of course get first priority on the fixer's time.

The section men do all the overhauling the combers require, make all their own settings, and otherwise keep their sections in condi-

SAMPLE SCHEDULE TO LABORATORY

WEEK BEGINNING Oct 22

MACHINES	SECTION MAN	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	
CARDS	Oliver Rudd					27-30	
	H Kissie				47-50		
	A L Ragsdale				77-80		
	C B Allen			108-111			
	Roy Lukes		140-143				
	Jack Horton	168-171					
COMBERS	B D Miller			11		18	
	Jim Traylor		12		13		
	Lonnie Thomas	15		16			
DRAWING	B D Miller			5-6		1-10	
	Jim Traylor		23		24-25		
	Lonnie Thomas	26-27		28			

AT THE TIME SAMPLES ARE RUN THE FOREMAN WILL RECEIVE A REPORT OF ANY MACHINE RUNNING ABOVE VARIATION STANDARD. SECTION MEN WILL TAKE THIS REPORT, AND AFTER CHECKING THE MACHINE, RETURN THE REPORT WITH ANOTHER SAMPLE FOR A RECHECK.

Q. C. S.

To prevent omitting any machinery during any one cycle of tests, a schedule is given to department heads.

LABORATORY REPORT

Mr FOREMAN (SECTION MAN) Date 9/5

Tests made on the following Machine indicates:

Variation above U.C.L. 5.45 Machine No. I.S. Head Comber No 5

Weight out of Tolerance. _____ Machine No. _____

Please check the above Machine and return a sample with this report for a recheck.

By Q.C.S.
Laboratory

Any substandard material is reported quickly to the person responsible. That person "stays with the machine" until it is again producing standard work.

tion to escape the "gigs" from the inspectors.

Comber noil percentage is checked weekly against a standard of 14.5% for the 1 1/16" SM cotton. The section man, usually with the aid of the foreman, runs a comber long enough to obtain an adequate sample. The sample is weighed on a portable quadrant scale.

Weekly the quality control office prepares a report reflecting the machines, by number, to be inspected in the forthcoming week. This amounts to two machines on each of the three sections. During the inspection all sliver is run through a Uster evenness tester (the section men remove the sliver samples from the comber and deliver them to the quality control office).

The maintenance system is practical. If the tester shows a sliver variation out of limits, the section man is given the report. He, together with the quality control supervisor, gives the comber his undivided attention until the condition is corrected.

Through this system the quality control supervisor and the foremen are not required to spend a great amount of time looking into a multitude of settings. The quality control supervisor thus is able to look for obvious malfunctions during his inspections.

The comber section men also maintain the drawing frames. The first shift is responsible for fourteen 4-delivery frames; the second shift, thirteen 4-delivery frames; and the third shift, eleven 4-delivery and two 6-delivery frames.

The distribution of the 13- and 14-frame jobs necessitates the listing of the drawing frames on the inspection schedule by individual frame numbers.

One breaker and one finisher drawing frame are represented in each test which includes sliver uniformity as well as the sliver weight. The uniformity is determined by the Uster; the sliver weight is averaged from the weighing of one test yard from each delivery. Additional checks include the sizing of all finisher drawing each shift. The assistant foreman does this by averaging the weights of ten one-yard lengths from each frame.

All drawing frames are overhauled each six months. The routine includes roll scrubbing, alignment, adjustment, and parts replacement.

Thirty of the frames have 4-roll plain bearings (metallic); 10 are equipped with 4-roll ball bearings. The section men do the overhauling—roll types do not influence the distribution of the frames.

Fly Frames and Roving. There are 32 fly frames maintained by one section man per shift. Here again the unit responsibility requires the frames to be broken into groups: the first shift section man is assigned 11; the second shift, 11; and the third shift, 10. All are 10" x 5" frames.

Quality is protected by the following standards of roving uniformity:

Hank Roving	Allowable Variation (%)
1.00 CP	5.10
1.00 KC	6.50
1.40 KC	7.00
1.80 CP	5.50
1.80 KC	7.50

The section men are scored one point off for each slubber roving found over the variation standard. Demerits are determined on the basis of defective rolls, chokes on rolls, chokes under saddles, dry rolls, levers out of place, etc.

The roving is checked daily and at random from two frames at a time. Records are kept so that there will be no duplication. Once the test cycle is completed, it begins again.

Uniformity is checked on the evenness tester from five bobbins per frame. The weight of the ten samples is checked at the same time.

Aside from the ten samples checked in the laboratory each day, the roving weight is checked within the department. Thus the responsibility for maintaining the "on weight" condition necessary for uniform spinning begins with the overseer of carding. Ten bobbins from each hank roving make up the test samples.

As in all departments, the fly frame section men are free to devote the bulk of their time to maintaining their own groups of frames; breakdowns get first priority. The frames are marked with one, two, or three dots to identify them with the shift which is responsible for their basic upkeep.

The roving packages are marked with chalk by the frame operators to identify the operators with the roving they produce. The hank roving is identified by colored bobbin tips.

Bad roving is separated by the spinners as to singlings, doublings, oil, slubs, tangled bobbins, etc., and is placed on the spinning frames to be picked up by the roving haulers.

The roving is marked close to the bobbin barrel so that as long as a wrap of roving remains on the bobbin, it can be identified with the operative who produced it.

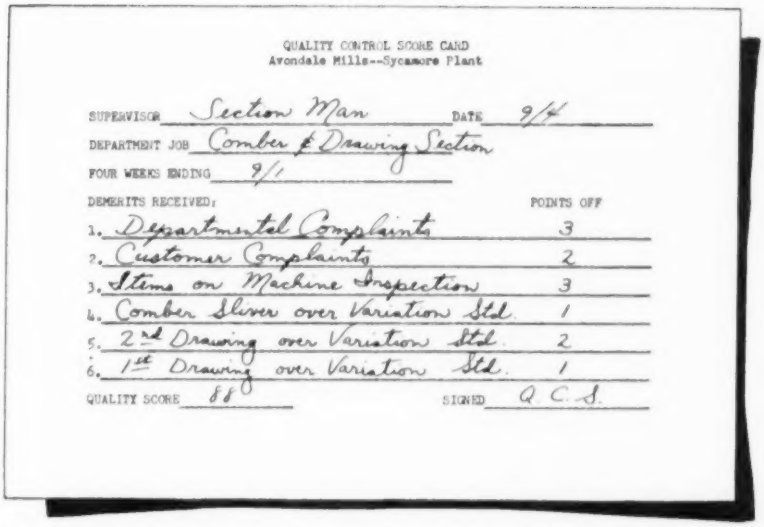
Once returned to the card room, bad roving is separated as to shifts. Then each section man shows the bad work to the frame operators who produced it. Each operator is required to straighten out his own bad work, place it in a regular doff of roving, and thus return it to the spinning room.

Now and then a measure of bad work turns up, unidentifiable as to frame tender. Such work is charged to both the assistant foreman and to the section man. Each assistant foreman is permitted a total of 25 bobbins of unidentifiable bad roving each shift without penalty. Careful records are kept of all bad work. The records reflect the number of bad bobbins and the person(s) responsible.

Following is a list of infractions used in grading the card room employees, and the number of demerits (points) assigned to each infraction:

Fly Frame Section Men

1. One point off for each item on daily departmental inspection report for which he is directly responsible
2. One point off for each item on machine inspection report (all items)
3. One point off for each bobbin of bad slubber (tangles, etc.) roving over standard
4. One point off for each bobbin of unidentified slubber roving over standard for each four weeks
5. Two points off for each hank roving weighed and found out of weight tolerance, that could be due to mixed gears or roving
6. Two points off for each customer complaint charged against department
7. One point off for each slubber roving over variation standard



QUALITY CONTROL SCORE CARD
Avondale Mills--Sycamore Plant

SUPERVISOR Section Man DATE 9/4

DEPARTMENT JOB Comber & Drawing Section

FOUR WEEKS ENDING 9/1

DEMERITS RECEIVED:	POINTS OFF
1. Departmental Complaints	3
2. Customer Complaints	2
3. Items on Machine Inspection	3
4. Comber Sliver over Variation Std	1
5. 2nd Drawing over Variation Std.	2
6. 1st Drawing over Variation Std.	1

QUALITY SCORE 88 SIGNED Q. C. S.

Periodic reports are given each section man, showing the items which have cost him points.

Lap Winders, Combers, and Drawing Section Men

1. One point off for each item on daily departmental inspection report for which he is directly responsible
2. One point off for each item on machine inspection report (all items)
3. One point off for each comber sliver over variation standard (4.05%)
4. One point off for each 1st drawing sliver over variation standard (CP 3.05%; KC 3.00%)
5. One point off for each 2nd drawing sliver over variation standard (CP 2.90%; KC 3.25%)
6. Two points off for each customer complaint charged against department

Assistant Foremen (All Shifts)

1. The assistant foreman's original grade will be the average grade of all section men on his shift
2. One point off for each item on daily department inspection report for which he is directly responsible
3. One point off for each error on machine hour report
4. One point off for each error on hank sheets
5. One point off for each error on payroll
6. One point off for each bobbin of unidentified slubber and speeder roving over standard for each four weeks
7. Two points off for each customer complaint charged against department

Spinning. Spinning frame maintenance is divided among two section men per shift. The 128 frames are divided among the shifts on a 44, 44, 40 basis. Each shift identifies its block of frames with the appropriate section man. Here again the section man is free to maintain his own frames with breakdowns getting first priority.

The spinning department head is

YARN ANALYSIS

AVONDALE MILLS — SYCAMORE LABORATORY — QUALITY CONTROL DEPT.

YARN COUNT 18/1 CP DESCRIPTION 1.80 Hk Roving

FRAME NUMBER 63 RS DATE 10-24

DETAILED TEST RESULTS

BREAKING STRENGTH SKEIN BREAK IN LBS.	COUNT 120 yds.	TWIST Single	EVENNESS, USTER INTERGRATOR "U"
106	17.70		10.90
120	17.70		12.00
118	17.86		10.70
112	18.18		10.30
115	17.70		10.30
106	17.86		10.00
111	18.35 ✓		10.70
126 ✓	17.54 ✓		11.40
115	17.70		11.10
105 ✓	18.02		11.00
			Avg 10.84

SUMMARY Uster Std. very even 9.50 - 10.75

BREAK			COUNT				
AVERAGE	RANGE	STG. CONSTANT	AVERAGE	RANGE	% OFF	HEAVY-LIGHT	% OFF
113	21	2010	17.86	.81	4.5	14	.78

REMARKS:

Weight Variation - Good 2.25% Plus & Minus

Copies To:

Superintendent
Spinning Foreman
Lab. File

Signed Q. C. S.

Quality control department reports daily on ten bobbins of yarn taken from spinning frames.

responsible for maintaining spinning counts "on the nose." Ten bobbins from each yarn count are sized daily within the department.

An additional check is performed by the quality control department daily. This check consists of ten bobbins taken at random and processed through the evenness tester.

A third check by the quality control department is carried out weekly. At this time five bobbins are taken at random from each yarn count and subjected to a complete yarn analysis by the Sylacauga general laboratory.

Weekly a doff of yarn from one frame side is consigned to the winder room for an ends down test at the winders. This is done on each of the three shifts on a rotating basis until all spinners have been checked. All bad splices are saved from the ends down test and are used as a training aid in improving spinners' skills.

The section men are given demerits for the bad work disclosed during the ends down test. The bad work is boarded to permit a thorough study of the frequency and severity of oversize splices, improper cleaning, etc. The section men spend much time patrolling their sections in search for improper spinning techniques such as ends being "lapped up" instead of being "twisted up."

Every four weeks the quality control department holds an inspection on each section man's job in search for mechanical defects—faulty aprons, weight levers out of adjustment, apron pins (U-shaped pins which hold the bottom and top aprons together), top roll alignment, worn nebs, etc.

Tube and cone winding is done on 20 Foster #102 winders. Following the procedure of unit responsibility, the section men on the first and second shifts are responsible for maintenance on ten winders each (with the usual breakdown priority being observed). The third shift operation is mainly an emergency one, and being so is not scheduled as routine. Thus the absence of third shift section man responsibility.

Each week the foreman and the assistant foremen conduct an ends down test of one yarn count. The foreman conducts the tests on the first shift; the assistant foremen conduct those on the second and third shifts. The yarn from these tests is not boarded. Rather it is used as a measure of progress in the same sense that ends down tests are carried out in spinning. The reports of the tests are given in weekly foremen's meetings.

The records are carefully filed for reference at any time. A standard figure is kept on ends down; thus at any time the running properties of the yarn undergoing winding can be checked easily against the known standard.

Infractions on which the spinning room personnel are graded, and the number of demerits (points) for each infraction:

Spinning Section Men

1. One point off for each item on daily departmental inspection report for which he is directly responsible

2. One point off for each item on machine inspection report (all items)

3. Five points off for each spinner and doffer checked and found making bad work

4. Two points off for each yarn count over variation standard caused by defective rolls, chokes, aprons, misplaced saddles, etc.

5. Two points off for each yarn count weighed and found out of weight tolerance that could be caused by mixed gears or mechanical causes

6. Two points off for each customer complaint charged against department

7. One point off for each 100 lb or major part thereof, over standard of 400 lb, of mixed, soiled, or otherwise undesirable yarn for regular production being packed out each four weeks (from packing report)

Assistant Foreman

1. The assistant foreman's original grade will be the average grade of all section men on his shift

2. One point off for each item on

Section man Burnell Miller and quality control supervisor Mel Dodd observe the evenness tester recording the variation in comber sliver from Mr. Burnell's section.

daily departmental inspection report for which he is directly responsible

3. One point off for each error on machine hour report

4. One point off for each error on hank sheets

5. One point off for each error on payroll

6. Two points off for each customer complaint charged against department

7. One point off for each 100 lb, or major part thereof, over standard of 400 lb, of mixed, soiled, or otherwise undesirable yarn for regular production being packed out each four weeks (from packing report)

Spinning Department Foreman

1. The foreman's original grade will be the average of the grades of all supervisors in his department

2. One point off for each item on daily departmental inspection report for which he is directly responsible

3. One point off for each per cent over 100% on payroll analysis

4. One point off for each per cent under 100% on production analysis

5. One point off for each $100.00 over on repair budget ($1500.00)

6. Ten points off for each departmental inspection report not answered 7 days from date shown on report

7. Two points off for each customer complaint charged against department.

8. One point off for each error on machine hour report

9. One point off for each error on hank sheets

10. One point off for each error on payroll

11. One point off for each 100 lb, or major part thereof, over standard of 400 lb, of mixed, soiled, or otherwise undesirable yarn for regular production being packed out each four weeks (from packing report)

Winding, Inspecting, and Packing. The section men check one side of a winder per week as assurance that the settings of blades, combs, thread guides, and arbor-to-roll are in correct order. Rollers are checked for burrs at this time.

Yarn inspection begins with the winder operators. They place the doffed packages on top of the winders in the order they are doffed so that first yarn inspector (he also collects the yarn from the winders) can associate bad packages with the spindles that produced them. The yarn is not taken out of the winding room if it is found imperfect at that point.

The next inspection given the yarn takes place in the packing room as it is transferred to the packing table. The first yarn inspector transfers his yarn to crates in the packing room. As the packers remove the yarn from the crates, they inspect it on the spot.

Any bad packages turned up at this inspection are returned, with appropriate records, to the winding room. The first yarn inspector is "gigged" for bringing imperfect packages to the packing scene if

Second and final yarn inspection is performed by Oliver Brown who removes the coned yarn from the crates where it is deposited by the first inspector (see bottom photo on p. 109). The packages are placed on the table to his left for wrapping.

the number of such packages exceeds the standard permitted per shift.

The persons making the final inspection are given demerits if a customer complaint arises over defects which should have been found by the inspectors.

The head packer is responsible for all yarn packing operations, and he is given demerits for all imperfections (over which he has control) which give rise to a customer complaint.

Inspectors are constantly reminded of the gravity of their tasks by a sign hanging in the packing department in easy view of all packing room personnel: "THE CUSTOMER IS THE NEXT INSPECTOR."

The packages are wrapped, boxed, strapped, and stenciled in the packing room. From there they are sent by way of an automatic overhead conveyor across the mill yard to the shipping room for final disposition.

Infractions on which winding department personnel are graded and the number of demerits (points) for each infraction:

Section Men

1. One point off for each item on daily departmental inspection report for which he is directly responsible
2. One point off for each item on machine inspection report (all items)
3. Two points off for each customer complaint charged against department
4. One point off for incorrect blade and comb settings (found on monthly inspection)
5. One point off for each 100 lb, or major part thereof, over standard of 400 lb, of mixed, soiled, or otherwise undesirable yarn for regular production being packed out each four weeks (from packing report)

Yarn Inspectors

1. One point off for each bad package over standard being returned from packing room each four weeks
2. Five points off for each bad package returned from customer
3. Two points off for each customer complaint charged against department
4. One point off for each bad package found by monthly inspection of 100 cones
5. One point off for each error on yarn board

Head Packer

1. One point off for each item on daily departmental inspection report for which he is directly responsible
2. Ten points off for each complaint received from customer due to incorrect marking on case
3. Two points off for each customer complaint charged against department other than above complaint
4. One point off for each case of yarn numbered incorrectly and sent to warehouse
5. One point off for each 500 lb under packing standard for a four week period (standard based on 5315 lb per hour)
6. One point off for each error on packing report

"How profit sharing fits your business," theme of conference

■ The applicability of profit sharing to the conditions found in representative types of business, including small business organizations, will get individualized attention at the 10th Annual Profit Sharing Conference, Nov. 14 and 15, Hotel Commodore, New York.

Separate panels of executives who have wide experience in profit sharing in their own industries will explain their companies' profit sharing plans and discuss their experiences for the benefit of others interested in applying profit sharing in their own organizations.

Sessions will be scheduled so that executives and others attending the Conference can listen to and ask questions of panels made up of members in their own industries, yet still take in general sessions devoted to communications, labor-union relationships, and other phases of profit sharing that are common to most businesses.

Profit sharing generally pays its own way and helps everyone involved because it creates worker attitudes that increase profitability of the firm's operations or makes other valuable contributions to a company's achievement record, the announcement stated.

Unlike most other employee benefit plans, profit sharing does not increase the cost of the product or service but, instead, often results in lower cost.

Weave cotton goods 200% faster?

New British shuttleless loom is reported to weave double cloth at 380 picks per minute in a 64-inch reed space

by a European correspondent
Exclusive

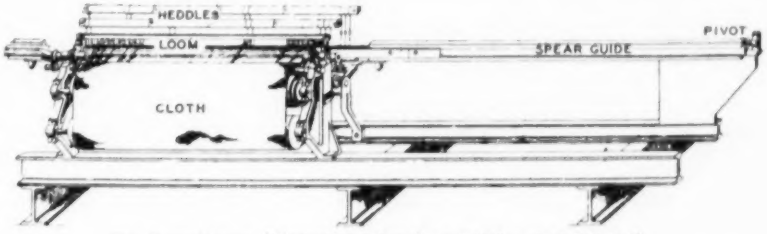
TRADITIONAL methods of making fabric by weaving have always tempted engineers who do not know the process intimately to seek simpler methods of manufacture. Some of these techniques have eventually evolved into commercial successes; for example, there is the highly satisfactory Sulzer weaving machine, which since the war has established itself in both the American and European textile trades.

Other looms have also appeared, and these include pneumatic, hydraulic, rapier, and circular types. Always the modification from tradition has been in the system of filling insertion, but although this modification might have been successful, there has been one, and a most important problem, remaining to be overcome: selvage. To solve the problem of making a satisfactory selvage which does not suffer from periodic failure to include one of the filling threads is perhaps the key to the success or failure of any new weaving machine.

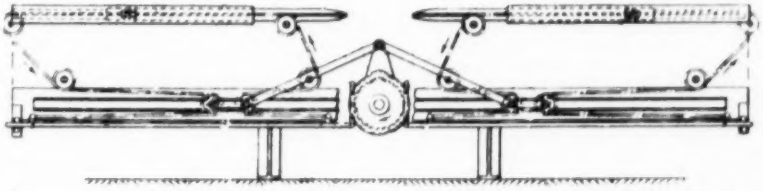
European manufacturers are now awaiting with keen interest news of yet another new weaving machine. Already a small unit is running in Northern Ireland, while another installation three times the size is now working in a jute mill in Scotland. Another installation is scheduled for completion soon in West Germany.

Although the new loom, known as the "Tumack" and built by James Mackie & Son Ltd., Belfast, Northern Ireland, is so far only running on jute cloths, it is more than probable that by the end of this year we shall see a model designed especially for weaving cotton.

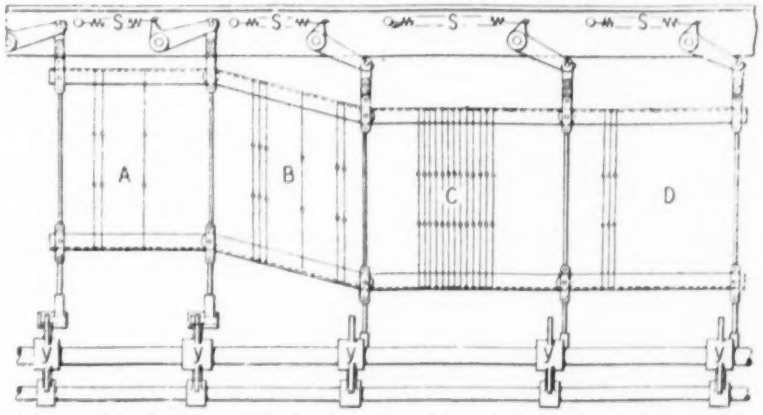
Working at a reported speed of



The Tumack loom (illustration taken from British patent 748,616).



Arrangement in the Tumack loom for traversing the spears reciprocally. The spears—top center—are fastened to chains. The picking sequence is such that there is a slight dwell during beat-up, during which the distance between spear tips is increased.



High rate of production is obtained with the Tumack loom by having the shedding arrangement taking place between the spear tips. Two sets of heddles, such as are shown here, are used. Each heddle deals with one set of warp threads from each of the two sheds. The heddle frame is divided into sections—A, B, C, D, etc.—and these are activated by the cams Y synchronized to draw down or release the sections in such a manner that shedding ripples across the loom between spear tips. Recovery to the "up" position is by springs S at the top of the frames. The heddles are, it is believed, designed and built by Grob & Co., S. A., of Horgen, Switzerland.

380 picks per minute across a reed width of 64 inches, to make a cloth about 128 inches wide, the new loom is said to be giving a weaving efficiency at present of upwards of 90%.

Now to the design of the loom itself. The description given here is based on British patent specification 748,616, taken out in the name of Weaving Research and Textile Commission Agents Ltd., and Derrick Walter Shimwell, a name associated with the famous Gawsworth loom of the 1930's.

Picking. Filling is inserted by two spears which *each* insert *two* filling threads at a time.

The spears which carry the filling threads from large supply packages at each side of the new loom, are called "duplex," and they are split horizontally so that each tongue of the spear can pass through its own shed.

As one duplex spear enters the shed from its own side, being guided through a tube at the side of the loom, the other recedes reciprocally. Thus the points of the two spears travel in the same direction across the loom. A motion is incorporated in the cam system, upon which the loom is based, so that towards the center of the shed the tips of the two spears are wider apart than they are at either selvage.

It is vital that when the spears are in the shed there should be a "substantial" space between their tips, for it is through this space that the shedding takes place, assuring that filling from one spear enters a different shed from that inserted by the other.

Shedding. Shedding is a fairly complicated matter. The heddles are mounted in a special type of heddle frame reportedly built for Mackies by Grob of Horgen, Switzerland. Each frame is divided into several sections so that the section can be drawn downward by cams and, upon release, a spring will draw it upwards once again. It will be appreciated from this that it is a fairly simple matter to make shedding take place as a rippling motion between the tips of the two spears as they pass across the loom. Thus one spear enters a new shed as the other leaves the opposite one.

At each side of the loom there is a special section of the heddles which only control one set of warp threads to make a single shed of the selvage. Thus a short selvage length at each side of the loom is made and this has in it twice as many picks as the cloth being woven as a tube in the loom.

The selvage is made by a special pin-cutter mechanism. The pin cutter is a combined unit, which at its tip is a simple yet strong pin that passes between the filling thread and the spear, while on its shank is a blade that can, as the pin travels downward, be used to cut the filling and leave a short end to be woven into the selvage.

Weaving Sequence. In a typical weaving sequence the spear has just taken a filling thread across the loom. This is cut very close to the selvage and left as a pick in the cloth. The same spear now recedes across the loom trailing from its tip a short end of yarn. As it recedes a clamp comes into operation to prevent yarn being drawn from the supply package, and a special take-up motion comes into action to take up the slack yarn as the spear returns across the loom "not weaving."

Meanwhile, the opposite spear is also passing across the loom "not weaving," but trailing its short length of yarn from its tip within the reverse shed. This spear takes its yarn not from the supply package, but from the reserve in the take-up device. It now leaves its short end in the selvage in the same shed as the main filling length which it pays out as it once again recedes across the loom. Behind it comes the first spear still "not weaving," but trailing a short end from its tip which is passing through the changed shed; yarn is once again provided for the traverse from the storage in the take up.

Upon completing its traverse across the loom, one spear is "out," while the other remains across the shed and this is pressed into the fell.

As the reverse takes place, the short end carried across the loom is paid out and a full filling thread inserted, while the spear advancing into the loom again brings its long end around the short one just woven in and this protects it, even though it is looped around it in another shed.

This description applies, of course, to the double shed served by each duplex spear, so that for each pick inserted as described above there is in fact a double insertion so that effectively weaving speed is double that described.

The heddles themselves are designed so that each frame controls two ends of the warp, one end from each cloth shed, which means that they must have two eyes. The selvage, as previously mentioned, is of a conventional type and shedding is normal except that there must, of necessity, be a packing-in of the filling yarns from both cloths being woven.

Everything in the new loom appears to be dependent upon a sequence of cam movements: shedding, beat-up, filling delivery, and take up for storage, etc.

The spears themselves are guided into the loom through special guide arms pivoted at their extreme ends on a mounting so that they can move with the beat-up motion. As the pick is inserted, a knob on the front of the spear presses it into the fell of the cloth. When finally the spear reaches across the full fabric width this knob on the tip protrudes beyond the selvage and a straight edge of the spear side is presented to the cloth fell.

This straight edge is pressed into the fell by the reed which comes up and presses the opposite side of the spear. A pivot on the spear guide, at its outer extremity, allows for sufficient movement to permit the spear to be moved up against the fell.

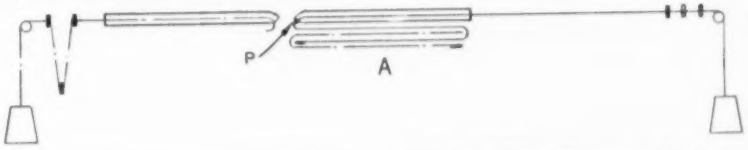
Power for the spears is delivered by a chain coupling to a lug at the rear end of the spear. The motion is designed so that there is a distinct dwell between spear tip movements, which brings them close together at the side of the loom, but which withdraws them somewhat during weaving when shedding has to take place between them.

It is not known at present what shed depth is required, but as the

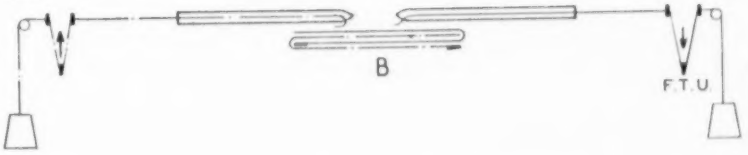
How Cloth Is Made on the Tumack Loom

Stages in the production of a fabric in the Tumack loom in which the looped filling yarns are cut by the combined selvage-pin-cutters.

A. The spear has just laid in a filling yarn and the cutter P is about to cut the filling a little way in from the spear.

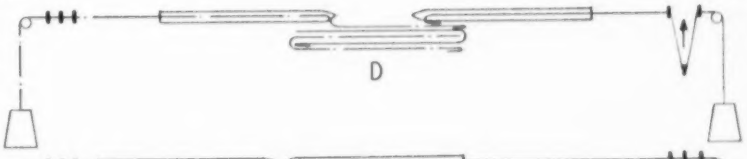


B. Spear receding, drawing behind it a short trailing end of filling. The filling holder is now closed and the loose yarn is taken-up by the special take-up FTU which later releases this length when required. It will be seen that the spear from the left is drawing out the released length of filling previously held by the similar unit on the left of the loom.



C. As the right hand spear again advances, the yarn from the take-up storage is released and taken into the shed.

D. The spear enters the shed still trailing the filling yarn behind it.

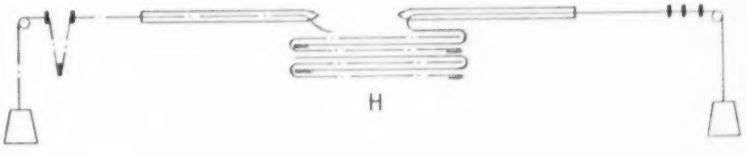


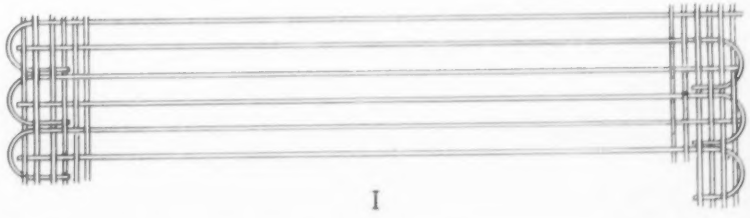
E. Short end of filling yarn is carried by the right hand spear and laid in position.

F. Right hand spear once again recedes leaving behind it a length of filling, while the left hand spear also advances, laying round the folded length a protective end.

G. Filling from the left hand spear is pinned and eventually cut as was that from the right hand spear in the first diagram, A.

H. As the left hand spear recedes, trailing its short length of filling behind it, the right hand spear advances, drawing filling into the shed from the large supply package which is now freed from restraint of the holder clamp. In this arrangement the selvage pin cuts the filling every four traverses of the spears and it tucks in the filling without cutting it at the end of three traverses. The arrangement is the same for each spear, but one spear is a stage of its cycle in front of the other.



I. The filling in this cloth structure is arranged so that a straight length is laid across the fabric and then a turned thread is laid into the selvage, the straight end being protected by the one turned in.

spears do not carry large packages of filling yarn it is obvious that each shed can be substantially smaller than would be necessary for a traditional shuttle; but since two sheds are required, it is probable that together they will be about as deep as a traditional shed.

Another factor to be considered with this new loom is the actual shedding motion. Since each heddle controls two sets of threads—one from each cloth—it is self-evidently essential that the two sets of threads that come together should be very precisely set so that there is no danger of one or more warp threads being split over the tip of the spear into the wrong shed.

As one set of warp threads comes down and the other comes up they should meet precisely to form a continuous sheet across the loom and this sheet must be in exactly the same plane as that formed by the reverse shed.

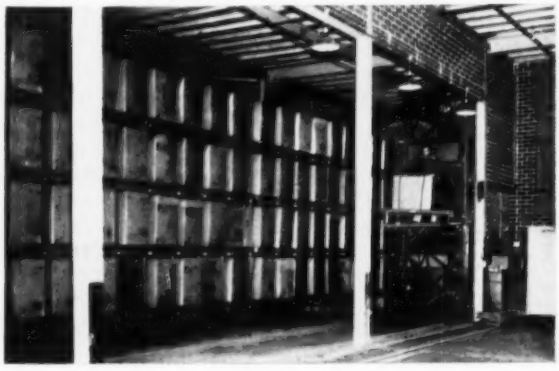
Prospects. So far it seems that the 24 looms running at Taymar Street in Belfast are working satisfactorily under the care of one weaver, while the 72 in Dundee appear to be functioning well. The 80 looms now on their way to Germany show that the trade is willing to accept this new form of weaving which, at least to three firms, has proved to be a commercially attractive proposition.

At present loom width is reported to be limited to 64 inches, but it is probable that this will be eventually increased as and when the demand arises.

How this new loom will appeal to the cotton mills when finally it is developed sufficiently remains to be seen, but from preliminary information it is safe to predict that here is a loom that might well be a serious contender with other methods of fabric production.

View of the side and high (or loading) end of rack handling 300-lb cartons of yarn on ¼" plywood pallets. Length of lanes is approximately 60 feet.

Unloading (or low) end of rack. Operative on the traveling vertical lift type elevator at right has just removed a carton of yarn from the rack and fed it onto the transfer section on the lift.



Yarn mill uses live storage to control inventory, save space

■ Crown Cotton Mills, Dalton, Ga., recently installed an extensive live storage rack system which is said to automatically provide fool-proof first-in first-out control of stored yarn—important because dyed lots must be kept together in order until final shipping. The rack also sharply reduces space requirements.

Actually, before the rack was considered, Crown planned on a larger building, according to the rack manufacturer. However, it was found that by using the rack, the building could be made considerably smaller, and the savings in construction costs would pay for the rack. So Crown's management decided to purchase the system which was engineered and built by The Alvey-Ferguson Co. The resulting economies in efficiency were realized from the very first day of operation, the report stated.

The live storage racks themselves consist of many units of gravity roller conveyor mounted in an adjustable rigid frame. These 60-ft-long conveyor lanes are sloped so that packages of yarn move freely by gravity to the front of the rack where they are readily accessible for selection and shipping. Loading is performed at one end of the rack, unloading at the other.

Unique loading devices load and remove cartons on opposite ends of the rack. These consist of elevators (vertical lifts) which traverse the face of the rack on rails, permitting quick mechanical access to each storage lane. This system made possible building the rack almost to the ceiling, which, of course, makes optimum use of the storage space.

Another important advantage cited for the live storage system is the fool-proof organization it establishes. This cuts down tremendously on expensive supervision, makes inventory-taking an extremely simple procedure. The simplicity of finding each item improves the efficiency of employees, both practically and psychologically.

DIVERSIFY!

That's how an old-line woolen mill met a major change in its markets

by Robert E. Andreae

Secretary-Treasurer
Yale Woolen Mills
Yale, Mich.

Exclusive

THE YALE Woolen Mills were founded seventy-six years ago when C. Andreae & Sons began weaving blankets for the residents of this small, rural community. Today, still managed by family descendants, the company has grown from its original one-man shop into a large and modern woolen mill, producing a variety of quality fabrics.

Over the years, Yale has gradually branched out from its early blanket weaving activities into high grade woolen fabrics for the apparel market, and into the furniture and automotive upholstery fields. The automotive industry in nearby Detroit, in fact, rapidly became one of our principal customers.

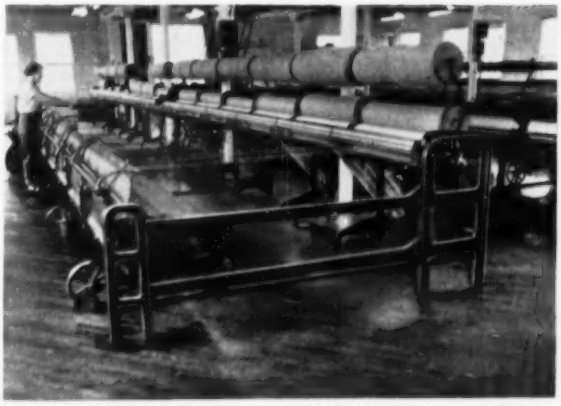
Following the Korean War, as style trends in passenger car design started the sweeping change to boldly modernistic lines, and interiors, similarly, began featuring increased amounts of imitation and natural leathers, plastics, and novelty synthetics, we found the demand for woolen automotive upholstery fabrics dropping, making production cutbacks necessary. Faced with the loss of a substantial portion of our market, management quickly realized that diversification of the company's fabric line was the only practical solution. This was successfully carried out.

In our weaving shed were approximately 90 standard multi-box looms, plus ten new high-speed weaving machines that had only recently been purchased, primarily for production of automotive fabrics. Setting sight on increased penetration of the wearing apparel market, the ten new machines, Warner & Swasey-Sulzers, were immediately equipped with filling mix units to enable the weaving of high-fashion dress goods from contrasting warp and filling.

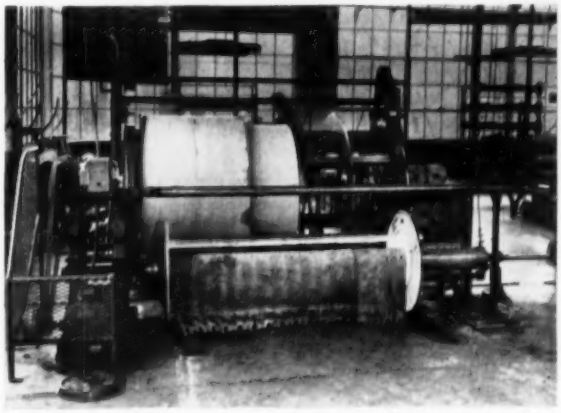
To back-up this operation, automatic winders were utilized to keep the machines supplied with three-pound filling packages, with both warp and filling yarns mule spun to insure consistent top quality.

In addition, we designed and built in our own shops an inexpensive harness and reed carrier, to facilitate handling the 32″ warp beams used on the high-speed weaving machines. With this carrier, the warp beams, holding six cuts (432 yards) more than the beams on other company looms, can be changed in a fraction of the time previously required and transported about the weave shed with complete mobility.

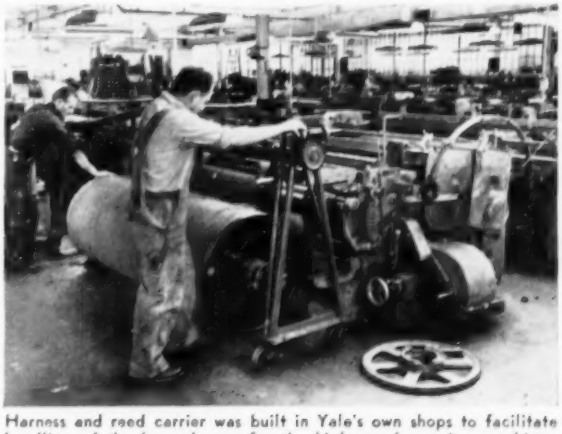
(Continued on page 177)



At Yale Woolen Mills, both warp and filling yarns are mule-spun to insure top quality.



This beam for high-speed weaving machines holds six cuts (432 yards) more than beams for the company's conventional multi-box looms.



Harness and reed carrier was built in Yale's own shops to facilitate handling of the large beams for the high-speed weaving machines.

A method for getting new and novel effects in woven fabrics

Get these special effects with

by Osbert Hughes

Exclusive

THE REED used in weaving is a very simple device to separate the warp ends and guide them to their proper place in the cloth, also to beat up the filling into the fell of the cloth at the forward motion of the lay.

The standard reed consists of flat steel wires, called dents, fastened top and bottom in a vertical position to horizontal rods or tubes, called baulks. The empty space between each dent is known simply as the air space*. There are generally two types of reeds: one in which the baulks are of wood with the dents attached in place by a binding of pitch, and the other of all-metal construction, with the dent wires being attached to the baulks by soldering.

The size of a reed is designated by the number of dents per inch. Considerable care should be exercised in the selection of a reed, both to ensure sufficient air space to accommodate the warp ends and avoid reed marks in the cloth and also to allow any knots in the warp to pass through the dents without breaking the end. The reed must also spread the warp ends to the correct width so that after weaving the cloth will contract to the proper width desired.

On all standard and staple fabrics the reed is attached firmly in place in the lay and the warp ends are drawn in uniformly through the dents of the reed. No variation is permissible in the dents per inch of the reed, or in the distribution of the number of warp ends per dent, the object being to produce as uniform and even a fabric as possible.

There are, however, many fabrics that utilize special reeds, or variations in the drawing-in of the warp ends in the reed. Some fabrics use a special reed in combination with other loom attachments to produce desired weaves or effects. Many interesting and novel cloths can be developed in this manner, the variety of special effects that can be obtained being limited only by the ingenuity and imagination of the designer.

Variable Denting. Probably the simplest forms of special effects by use of the reed are obtained by variable denting. In other words, while the body of the cloth has the warp ends drawn in an even manner, cords, satin stripes, or decorative ends will be drawn in with more or less ends per dent than in the body of the goods. For instance, cords and satin stripes frequently are drawn in with double the number of ends per dent that there are in the body of the cloth. Since these cords or satin stripes are often made with a heavier yarn count than used for the body of the cloth, this crowded denting has the effect of further accentuating the decorative effect of the stripes.

On the other hand, decorative ends are often of a finer yarn count than the body ends and thus, if all the warp ends are evenly distributed in the reed, the decorative end would show up as a thin place in the cloth. Usually a fine decorative end is placed in the dent as an extra end. Such a cloth might consist of a warp of 30/2 cotton count, with occasional decorative stripes of one end of 100-denier rayon or other synthetic yarn. The body of the cloth might be reeded with two ends per dent, the decorative stripe being drawn in the same dent as the two adjacent body ends, making it three ends per dent at this point.

Some fabrics are constructed with a solid warp made with only one yarn count and color, this warp being drawn in through the reed with varying numbers of ends per dent according to a prearranged pattern. This will produce a fabric with definite warp stripe effects as a textured cloth. If such a warp layout is woven on a dobby loom with, say, a basic plain weave, but with portions of the filling woven with two, three, or more picks in a shed, this will produce a checker design in the cloth.

Illustrated at Fig. 1 is a dress goods fabric made in this manner. This sample is made on a black warp with white filling, and while woven on a Draper single-shuttle loom it has all the appearance of a box-loom fabric, the warp stripes being obtained by crowding the ends in the reed while the filling stripes are made by weaving two, three, or more, picks in a shed.

Another variation in reeding is to leave one, two, or even more dents in the reed completely empty of warp ends at predetermined intervals of the reed. This will produce a "skip-dent" fabric, often used for summer-weight sport shirtings and similar fabrics. The number of dents left empty at each stripe will of course depend on the construction of the cloth, the number of dents per inch of the reed, and the width of the skip-dent desired. Fig. 2 shows a sport shirting material made in this manner.

This same principle is also employed in leno and marquisette weaving, where quite wide skip-dent stripes are used in conjunction with wide solid-weave stripes to simulate lace effects for curtain and drapery fabrics.

Pattern Reeds. Certain cloths, such as novelty dress goods, sport shirtings, bedspreads, drapery and upholstery fabrics, and similar decorative fabrics, are often constructed with a fine yarn count in the body of the goods but using a

*To many weavers and designers, the term "dent" means the space between the wires of the reed; the wood or metal rod into which the wires are set is also known as a "rib." —The Editors.

loom reeds

very much heavier yarn for decorative or figured stripes. This heavy yarn stripe requires a coarse reed with very few ends per dent, probably only one. However, if such a reed is used, the ground warp stripes using the fine yarn count would have to be reeded with so many ends per dent that the ground portion of the design would show a pronounced "reedy" effect that would be quite objectionable.

To overcome this a pattern reed is usually ordered from the reed manufacturer. This pattern reed will be specially made according to the design of the warp for which it is intended, and will have wide air spaces for the heavy yarn stripes with smaller air spaces for the stripes of the finer yarn. Such a pattern reed is of course limited to the design for which it is made and cannot be used for other designs.

Fig. 3 shows a drapery material woven with a pattern reed in this manner. These cloths require the warp to be placed on two loom beams, the ground or fine yarn being usually on the bottom beam with the heavy yarn stripe being placed on the top beam.

Colonial Bedspread. An interesting and extremely attractive fabric, usually made for Colonial-type bedspreads and occasionally for matching draperies, is shown at Fig. 4. This fabric combines a pattern reed with other loom attachments to obtain the high loop effects that form the design.

Two loom beams are used, the ground warp being usually the bottom beam and the loop ends on the other. An automatic and positive warp let-off motion, in conjunction with slackener bars, is employed to give the loop ends the high raised loop effect. A pattern reed is used on account of the wide difference in yarn size between the ground and the loop ends. This pat-

Fig. 1. Dress goods fabric made with warp reeded with a varying number of ends per dent, in a prearranged pattern.

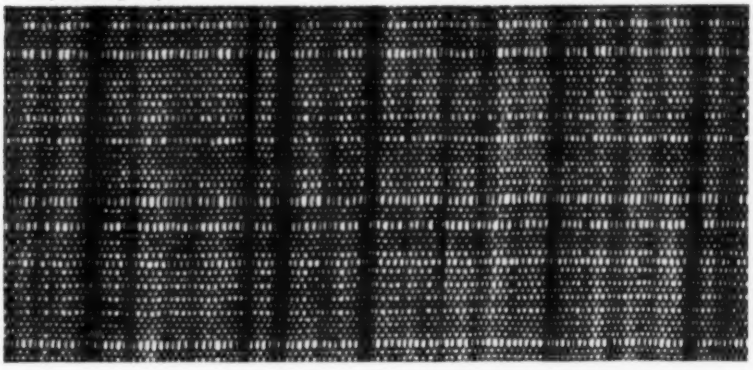


Fig. 2. Skip-dent sport shirting material, made by leaving empty dents in the reed at regular intervals.

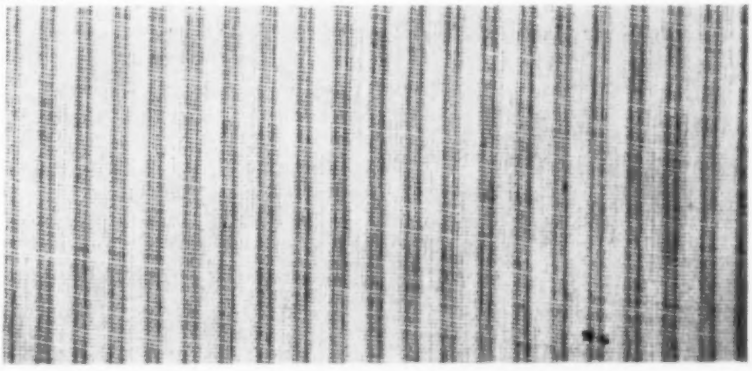


Fig. 3. Drapery material woven with a pattern reed having wide dents and narrow dents in a prearranged order.

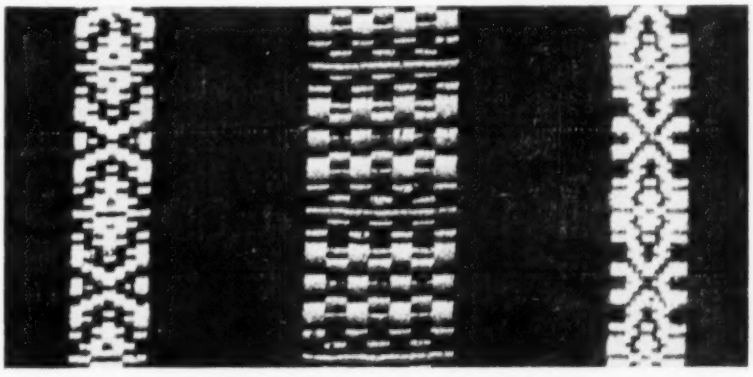
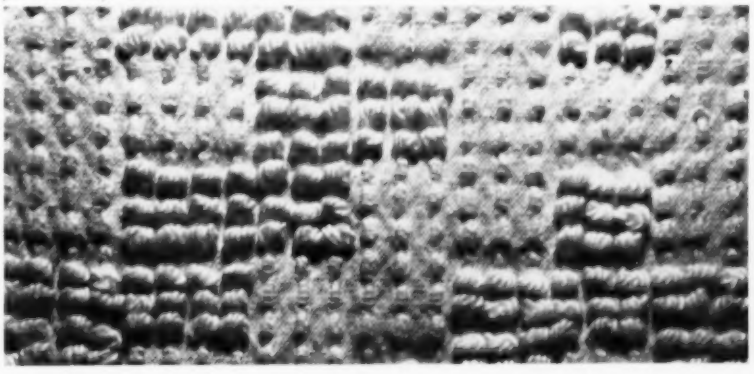


Fig. 4. Colonial-type bedspread material, woven with a pattern reed in conjunction with positive warp let-off motion and slackener bars.



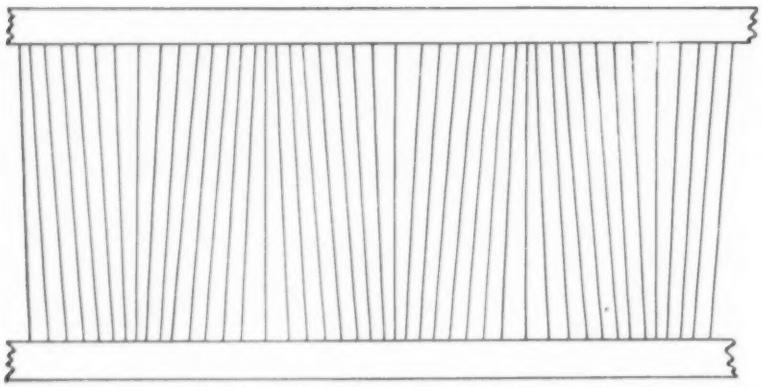


Fig. 5. Fan reed, which will produce fabrics with a well-defined ombre effect in warp stripes on a solid-colored warp.

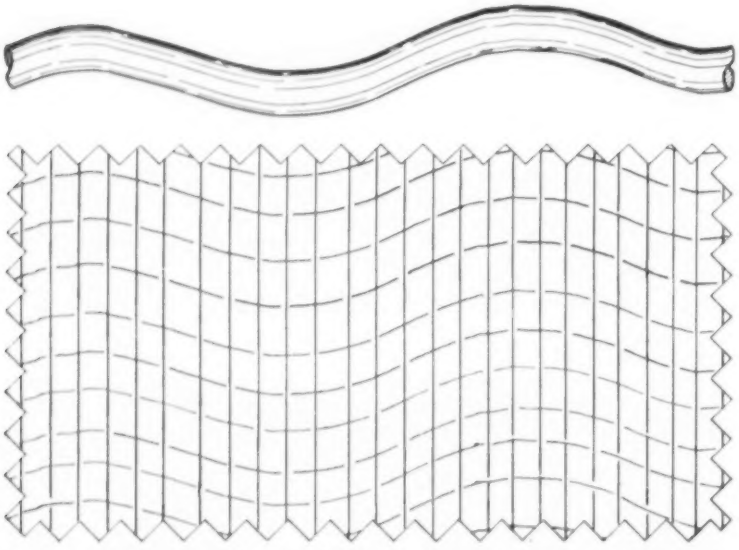


Fig. 6. Top illustration shows the baulk line of a curved reed; bottom illustration shows the wavy effect in the filling obtained with this type of reed.

tern reed is made with one wide air space to six normal air spaces, to accommodate the warp pattern of one end of loop yarn to twelve ends of ground warp yarn.

The ground warp is usually woven on four harness shafts controlled either by cams or a dobby motion. Only the loop ends are controlled by the Jacquard, which is tied up especially for this fabric. It will be noted that due to the comparatively low number of loop ends in the goods, a Jacquard of quite low capacity will be entirely adequate. The ground warp is woven with plain weave throughout the fabric, while the loop yarn is woven plain for several picks, then is floated either over three picks or under three picks, depending on whether the loop is to appear on the face or on the back of the goods. At the same time that the loop end is floated, the automatic warp let-off and the slackener bars feed in an extra amount of yarn which, passing through the wide air-spaces of the pattern reed, forms the loops in the cloth.

The design is made by the loops appearing on either the face or the back of the goods, as controlled by the design placed on the cards of the Jacquard. It will be noted that where the loops appear on the face a depressed effect appears on the back, and vice versa, thus making a completely reversible bedspread or other fabric.

Terry Cloth. Special reeds are often used in conjunction with other loom attachments for the production of certain fabrics as well as for decorative effects in staple goods. Probably the best known of these combinations is the swinging reed commonly employed in the weaving of terry cloth as used for towels, washcloths, bath mats, etc. In terry weaving two loom beams are used, the ground warp being on one beam and the terry, or pile, ends being placed on the other.

The ground warp is woven under normal tension throughout. The pile warp has an automatic and positive let-off motion which allows the pile ends to feed in with considerably more take-up than the ground ends and with very little tension. The pile warp is woven with a 2-up, 1-down weave to produce the pile, or terry, effect on the face of the goods, with a 1-up, 2-down weave on alternate pile ends to produce the terry effect on the back of the goods.

The reed is usually made with regular dents. It is not a pattern reed, and the two warps are drawn in uniformly. However, the terry loom reed, instead of being fixed firmly in place in the lay, is so arranged with a hinge motion at the top that it swings back while three successive picks are inserted, then swings forward and beats up all three picks at one time into the fell of the cloth. This produces the loop pile effect that is the distinctive feature of a terry fabric.

It will be noted that terry cloth is made by a combination of the special swinging reed and the positive warp let-off motion. Usually for the body of the cloth one-half of the pile ends appear on the face and the other half on the back. In those portions of the design where all the pile ends are woven on one side of the goods the reverse side will appear as a depression. It is by the utilization of these three possible effects, e.g., one-half pile up, all pile up, and no pile up, that the figured effects found on dobby or Jacquard designs are obtained. Also, occasionally in places such as the borders of a towel the swinging reed is allowed to remain in the usual position of the reed on an ordinary loom, the pile warp is

woven in with normal tension; and various standard weaves are employed to produce a border stripe, with no terry weave appearing, across the width of the goods.

Frieze. Brief mention should be made of frieze cloth. This fabric, for which a standard reed and uniform system of drawing in the warp is almost always used, does have a special pile wire passing through the reed and into the fell of the cloth. These pile wires are mounted on and controlled by special harness shafts, and it is their up-and-down motion along with the rise and fall of the warp shed that produces the distinctive loop pile of frieze cloth.

Two loom beams are used, and the pile wire holds up the pile end that has been woven over an extra pick of filling, while at the same time the forward movement of the reed beats up the filling in the usual manner. After the cloth is doffed from the loom these extra picks are removed from the cloth and discarded as waste, this operation often being done manually except in some larger mills which may have a special machine for this purpose.

Diagonal Reeds. When using standard reeds there is always a possibility of warp streaks or reed marks, especially in leno or marquisette fabrics, as well as in low-sley fabrics with warps considerably finer in yarn count than the yarn used for filling. Also, if there is an appreciable amount of uneven tension in the warp ends the standard reed may be the cause of streaks from slight distortions in the position of the warp ends in the cloth. Some weaves may tend to "pair off" some of the ends, even though these ends may be drawn in through separate air spaces in an effort to break up this "paired off" effect.

To overcome these defects, recourse is sometimes had to a diagonal, or angle, reed. This reed has the dents placed in a diagonal position at an angle of about 96° instead of the exactly vertical position of the dents in a standard reed. The diagonal dents cause the warp ends to be continuously shifting as they traverse the dents; the warp ends are always pressed against the same side of the dent, and the shifting positions of the warp ends cause the heddles and drop wires to remain in motion continuously. These effects give the warp ends the best opportunity to assume their proper place in the fabric, thus preventing streaks caused by the tendency of the warp ends to come together in groups.

Coming in November!

Next month TEXTILE INDUSTRIES will feature a special section devoted to dyeing, bleaching and finishing.

You will also find a description of a new apparatus for reducing card waste, and details of results a mill has had with it.

A mill superintendent will show how he uses a chart for quick figuring of sides run and wages for spinners.

Other articles tell how to design for face-to-face carpets, how to get more even drawing sliver, and how to use charts to control filling requirements.

Fan-Shaped Reeds. A variation of the diagonal reed, although intended for a different purpose, is the fan reed, in which the dents are placed in the baulks in a fan-shaped position. This formation is similar to the diagram at Fig. 5. The fan reed will produce fabrics with a well-defined ombré effect in warp stripes on a solid-colored warp, because the ends are partially grouped together and partially spread apart by the fan-shaped formation of the dents.

It will be noted that the effect of the fan reed is exactly the opposite to that obtained by the diagonal reed. Instead of eliminating streaks it causes very definite streaks to appear, in a controlled manner, as a feature of the pattern. By the use of different colors as decorative or warp stripes, cords, uneven denting, etc., a wide field opens up for the stylist to create new and novel effects in many fabrics. This is a field that is far from having been fully exploited in the past.

The fan reed can be so arranged in the lay as to be continually raised and lowered during weaving. This will cause the beat-up to occur while the warp ends are formed in a different grouping in the reed. The warp streaks will then appear as a curved, or wavy, line in the goods. These wavy warp stripes can be further accentuated by decorative ends or various colors, and here again with this device many new and novel effects and patterns may be created.

Curved Reeds. Some experiments have been made in the use of curved, or wavy, reeds. These reeds have the dents placed in the baulks in a curved or wavy line instead of the straight line found in conventional reeds. When the filling is beat up it will be positioned in the cloth in a curved or wavy line across the goods. This curved line can be further emphasized by the use of various colors of filling, woven on a box loom.

Illustrated at Fig. 6 is the shape of the baulk line of the curved reed, also the formation of the filling in the cloth as woven by the use of this special reed. It would probably be necessary to do some experimenting in order to determine the right amount of curvature necessary to produce the best effect in any particular fabric.

Double Reeds. No particularly different effects are obtained by the use of a double reed, but it is mentioned here as another interesting variation of a standard reed. The double reed is mostly useful in the weaving of very high sley warps, also for fabrics made with two warps end-and-end of heavy yarn and very fine yarn.

The double reed, as its name implies, has two rows of dents, both rows containing exactly the same number of dents. The back row is so arranged that its dents fall precisely in the center of the air spaces of the front row, so that naturally the front row's dents fall in the middle of the back row's air spaces. The warp ends are drawn in through the dents of both rows. This arrangement separates the ends and assists in keeping them straight and unentangled; it also helps to prevent knots in the yarn from chafing and breaking the adjoining warp ends.

Formulas offer a means of determining the

Minimum staple for the highest count

by John Duerst
Exclusive

THE COTTON classer of a mill generally has an almost uncanny skill in selecting a cotton suitable for the highest (finest) counts he requires.

Of course, attempts have been made to calculate minimum staples for highest counts. In doing so, it is proper to assume that all important fiber properties should serve as ingredients in a successful formula for determining the spinnability limits at minimum staple. Pressley tester, Micronaire, Arealometer, and fiber length testing apparatus are invaluable for determining the data for the formula.

The principal ingredients for the prediction are:

L_m—mean fiber length, inches
a—specific fiber surface area, cm^2/mg*
F—fiber weight, micrograms/inch
P—Pressley index

Also required are conversion constants, coefficient of friction, and twist.

It is of course conceded that selection of speed, ring size, and draft will greatly influence spinnability limits. Here, for the purpose of basic assumption, the mechanical set-up is considered to be of moderate proportions, and is thus not specifically stated.

As is the case with many basic laws, coefficients indicating practical application may be added for mechanical functions encountered.

Basic Strength Equation. If a strand of yarn is broken at zero jaw setting, we can expect absolute strength, i.e., the resulting strength is the sum of all individual fiber strengths within a strand. If the individual fiber strength is indicated by the Pressley index, P, and the number of fibers per cross section = S, then we will have

$$SPK = \text{Strength} \qquad (1)$$

where K is a conversion factor, taking into account the Pressley strength conversion factor and the mode of testing (single strand or 120 yards).

If a piece of this same strand is broken at jaw distances of 8, 10, or more inches, the theoretical strength should also be as in formula (1), but the potential fiber breaks are realized only if the fiber surface-gripping power (friction) is equal to the absolute breaking strength of the individual fibers. This is theoretically expected if optimum twist is inserted in the yarn.

If the fiber surface area = "A" sq in, and the number of fibers per cross section = "S", we have

$$SAK_1 = \text{Strength} \qquad (2)$$

in which K_1 is a conversion factor including the coefficient of friction, which comes into play when pull is applied to the strand.

If for both (1) and (2) the strength is 1.0 lb, we have

$$SPK = SAK_1 \qquad (3)$$

Here "S" cancels from the picture. However, in order to avoid this we proceed as follows:

$$SP = 1/K$$
$$SA = 1/K_1$$

Both equations are multiplied:

$$S^2AP = 1/KK_1 = \text{New Constant } K'$$

Or:

$$S\sqrt{AP} = K' \qquad (4)$$

Formula (4) consists of the following ingredients:

$$S = \frac{15{,}000}{NF}$$

N = yarn number
F = mg/in (Micronaire upland scale)

A = fiber surface

The Micronaire reading gives the weight of a one-inch length of fiber in micrograms, "F", but "F" micrograms = F/1000 milligrams.

Each milligram weight of fiber has a specific surface area, "a", of so many cm^2, i.e.,

$$a = cm^2/\text{milligram}$$

The area of a one-inch length of fiber in cm^2 is "F" divided by 1000, times "a". The surface area, "a", is expressed in cm^2/mg, and to convert this to in^2/mg, "a" must be divided by 2.54^2.

$$\frac{F \times a}{1000 \times 2.54^2}$$

gives the surface area in square inches per one-inch length of fiber.

$$A = \frac{F \times a \times L_m}{1000 \times 2.54^2} = \frac{FaL_m}{6450} \text{ sq in}$$

The specific area, "a", is measured by the Arealometer, in mm^2/mm^3, which is divided by 152 to obtain cm^2/milligram.

If all values are entered in formula (4), we have

$$\frac{15{,}000}{NF}\sqrt{\frac{FaL_m}{6450}}\sqrt{P} = K'$$

When solved for "N", this gives

$$N = \frac{15{,}000}{K'\sqrt{6450}}\sqrt{\frac{aL_mP}{F}} \qquad (5)$$

which becomes, using a new constant, "K""

$$N = K''\sqrt{\frac{aL_mP}{F}} \qquad (6)$$

The constant "K"" can be calculated from observed actual performance of one or more "highest" yarn numbers run from a cotton type of known fiber characteris-

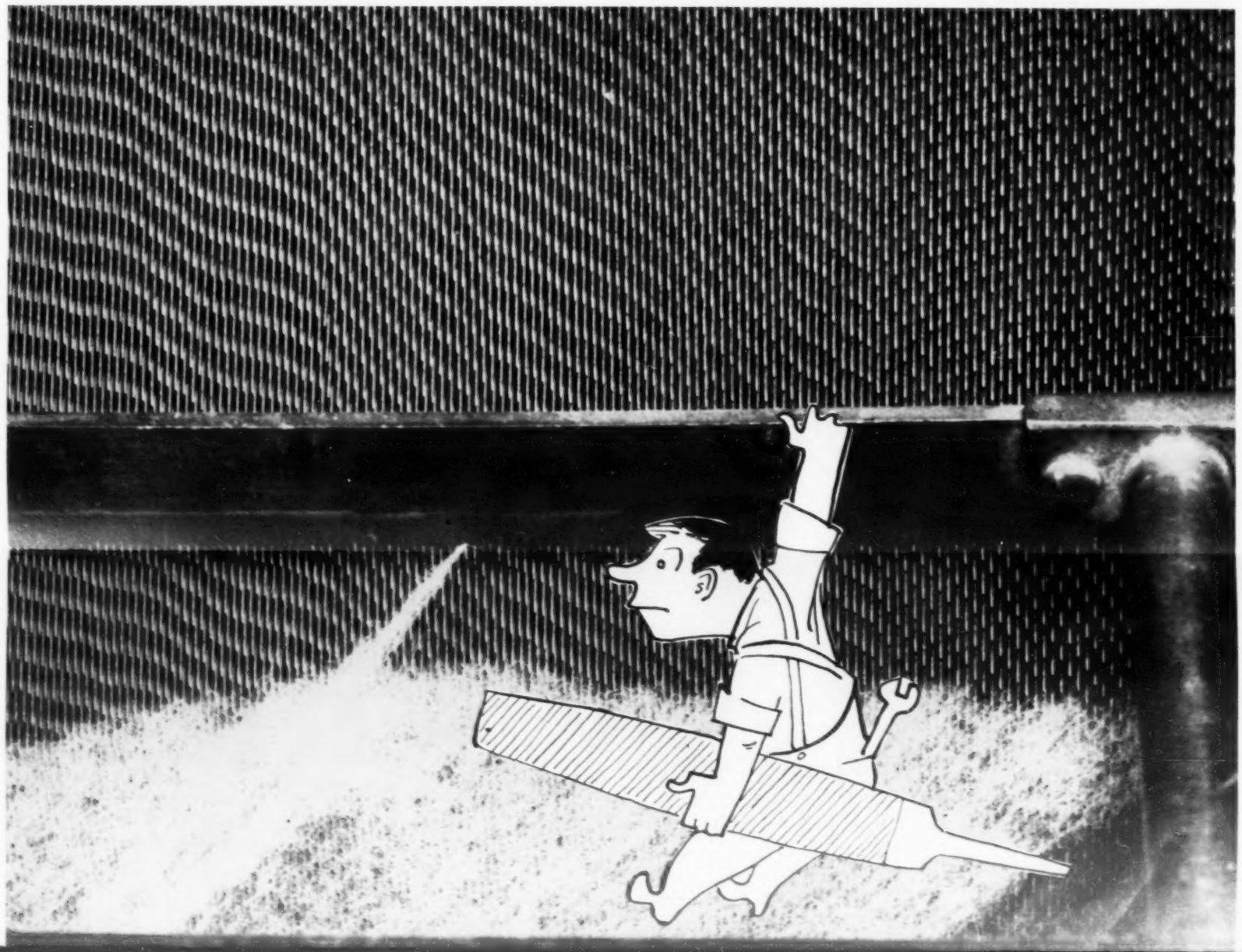
(Continued on page 129)

*If given in mm^2/mm^3, divide by 152.

Tear along this line to post in card room

FILE OFF THE BURR

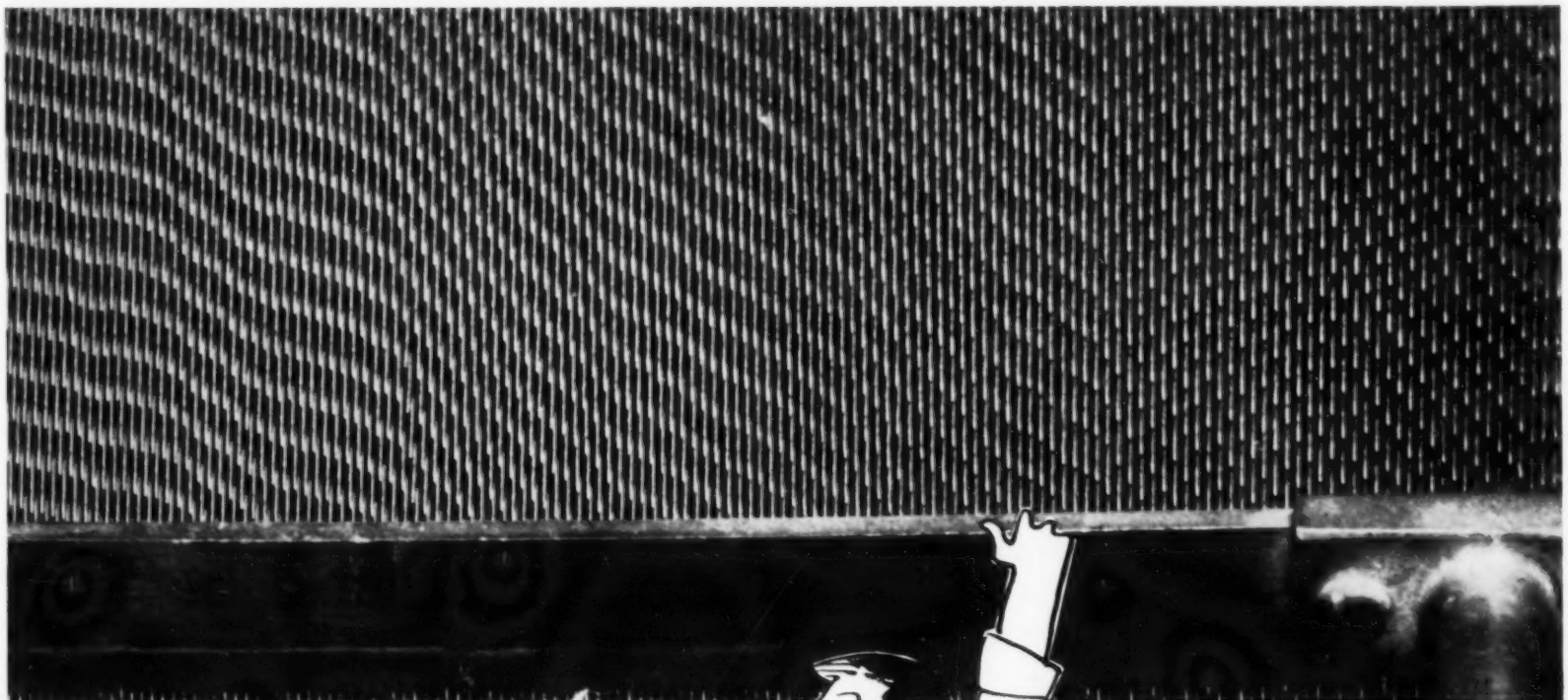
before it lumps or breaks the web

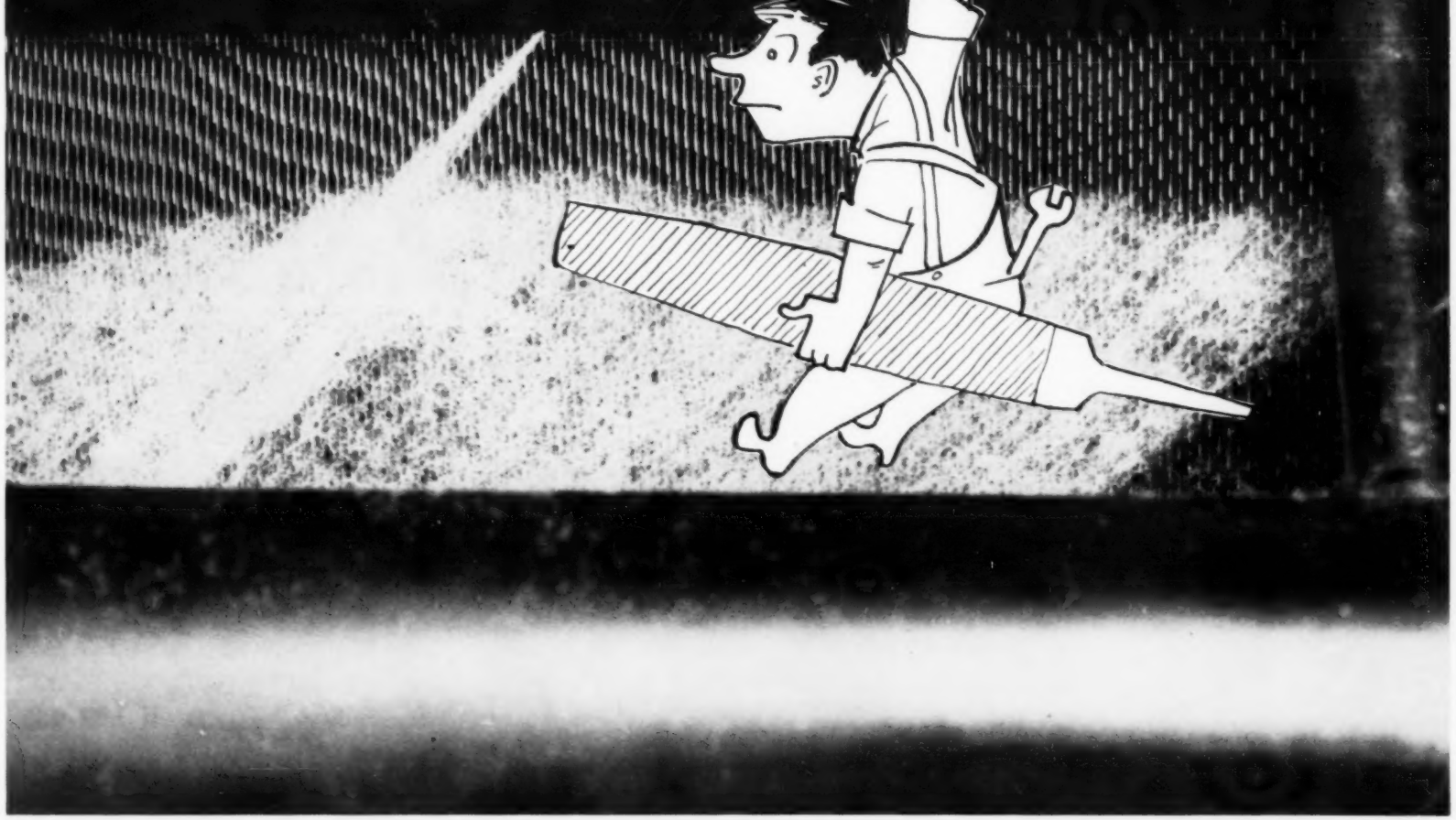


Tear along this line to post in card room

FILE OFF THE BURR

before it lumps or breaks the web





Textile Industries

7

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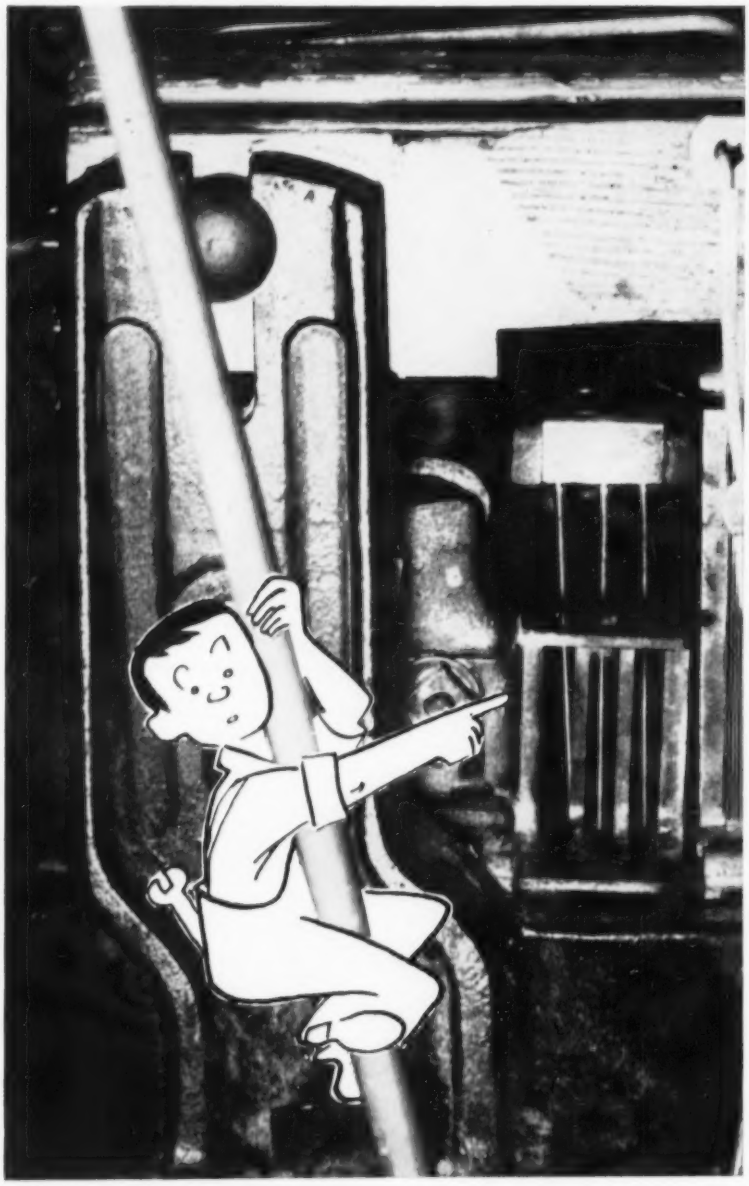
This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

CHECK FILLING FORKS REGULA

Bent forks like this .... cause misp



Textile Industries

8

Texti

LARLY

ispicks or thin places like this . . . .

tile Industries POSTER SERVICE

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ARLY

spicks or thin places like this . . . .

tile Industries POSTER SERVICE

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(Continued from page 124)

tics "a", "F", "L_m", and "P", at optimum twist inserted for carded yarns.

Let us assume that a 60s yarn was found to be the highest spinnable count for a cotton with

$a = 2.8\ cm^2/mg$
$F = 4.5\ mg$
$L_m = 0.914"$ (classed as 1")
$P = 8$ index

then

$$K'' = \frac{\text{Highest count}}{\sqrt{\frac{aL_mP}{F}}}$$

$$K'' = \frac{60}{\sqrt{\frac{2.8 \times 0.914 \times 8}{4.5}}} = 28 \text{ (approx.)}$$

Constant 28, when substituted in formula (6), will make it general for carded optimum twist yarns.

The constant "K"" is not a universal figure for all mills, but must depend on local conditions. The highest count running well from a certain fiber length and the properties of this particular fiber are substituted in the formula for calculating constant "K"". The constant thus determined is then applicable to all fiber lengths in the mill and can be used in place of the 28 in formula (7) below.

$$N = 28\sqrt{aL_mP/F} \qquad (7)$$

For practical application there are two other main factors to be considered, which must of necessity be included in formula (7):

First, not all yarn counts are spun at optimum twist.

Second, not all yarn counts are made from carded sliver only.

A twist index factor, "Z", indicating per cent of potential maximum strength has to be entered in formula (7). In addition, a comber waste (noils) factor must be entered, since it is well known that comber noils extraction increases the equivalent staple value for better spinnability and consequently "higher" numbers may be expected from a cotton type. Factor "Z" is always 1.00 at optimum twist.

At optimum twist multiple "M.", and actual twist multiple "M"

$$Z = \left[1 - \left(\frac{M}{M_o} - 1\right)^2\right]$$

noils factor "f" determined empirically is

$$f = \left(1 + \frac{W}{225}\right)$$

where

W = per cent noils at comber

When the two factors "Z" and "f" are entered in (7), we have

$$N = 28\sqrt{aL_mfPZ/F} \qquad (8)$$

At "N" known and solved to L_m:

$$L_m = \frac{N^2F}{784\ afPZ} \qquad (9)$$

Since both "f" and "Z" have a value of 1.00 for carded, optimum twisted yarns, formula (8) is better written as follows:

$$N = 28\sqrt{fZ\left(\sqrt{aL_mP/F}\right)} \qquad (8a)$$

In table I are a few examples of "high numbers," using constant 28.

For further data, the reader is referred to "How to Determine the Correct Twist for Yarn," by John Duerst, which appeared in TEXTILE INDUSTRIES for March, 1956, page 145. The noils factor was discussed in the November, 1940, issue, on page 53.

TABLE I

Grader's Staple, In. (L)	Mean Staple, In. (L_m)	Specific Fiber Surface, cm^2/mg (a)	Fiber Weight, Mg (F)	Pressley Index (P)	High No. Opt. Tw. Carded[1] (N)	Noils % (W)	Waste Factor $1 + \frac{W}{225}$ (f)	High No. Opt. Tw. Combed[2] (N)
7/8	0.80	2.6	5.0	6.9	47½	—		—
1	0.914	2.8	4.5	8.0	60	8	1.035	62
1 1/8	1.04	2.9	4.2	8.2	68	12	1.053	71½
1 1/4	1.14	3.1	3.8	8.6	79	15	1.067	84
1 5/16	1.15	3.2	3.5	9.2	88½	18	1.08	95½
1 13/32	1.22	3.34	3.4	9.3	93½	20	1.089	102

[1]Optimum twist, carded:
Z = 1.0
f = 1.0
At less than optimum twist, multiply N by Z.
[2]Optimum twist, combed:
Z = 1.0

Use the new textile safety code to reduce accidents

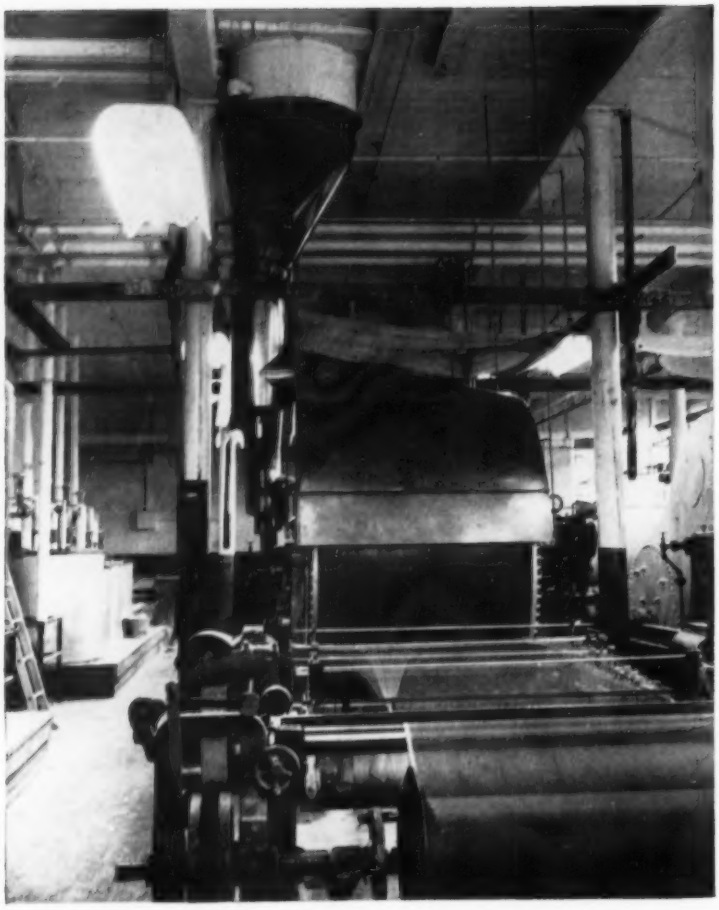
■ Corrective measures for the textile manufacturing industry's accident problems are prescribed in the newly revised American Standard Textile Safety Code which is now available.

Intended for adoption by regulatory bodies and for use as a voluntary standard for safe operation of textile machinery and equipment, this safety code was developed by Sectional Committee L1 of the American Standards Association on Industrial Safety Codes which is under the administrative leadership of the National Safety Council.

"The committee," explained Chairman Frank W. Marcaccio, chief, Division of Industrial Inspection, Department of Labor, State of Rhode Island, "diagnosed the causes of accidents in the textile industry before preparing the final draft; and, just as a doctor prescribes treatment for illness, the committee prescribed corrective measures which it believed would apply directly to the industry's specific accident problems.

"Before the standard was completed, the proposed draft was given a preliminary trial in some of the New England states. Evidence showed that it would not constitute too much of a burden to the industry. Employees of the textile industry became aware that it was their responsibility to work safely, as well as the responsibility of management to provide safe conditions."

Copies of American Standard L1.1-1956, at a price of 75¢, are available from the American Standards Association, 70 East 45 Street, New York 17, N. Y.



A copper hood installed over a large-cylinder slasher.

Anti-stick roll, which has exaggerated fluting, gives the yarn a continual in and out movement, and helps to take the yarn off the cylinder.

WARP

Article 18—Discussion of anti-stick rolls, hoods, multi-cylinder slashers, hot-air dryers, cooling fans, measuring rolls, and split rods*

By Paul V. Seydel, D.Sc.
Seydel-Woolley & Co.

Exclusive

Anti-Stick Rolls. Several mills have made use of a device which for want of a better name might be called an "anti-stick roll." This is a wooden or metal roll with exaggerated fluting, which takes the warp yarn sheet off the first cylinder of the slasher. The fluting gives a continual in-and-out motion to the yarn sheet, so that it has an irregular stronger pulling motion away from the cylinder surface. This is often sufficient to overcome sticking troubles where conditions are not severe.

Ordinary guide rolls and slasher cylinders may be treated with Teflon, an inert fluorine-based plastic which is applied to the metal surface and baked on. This plastic has excellent release properties for size—that is, the size mix will not stick to this surface either while damp or after drying. The rolls or cylinders must be sent to the factory for application of the Teflon. Results have been eminently satisfactory, and wearing quality of the plastic film is fairly good.

Slasher Hoods. A hood is an ad-

*Continuation of discussion of the slasher room and its equipment, which began in the June issue. The first article of this series, which deals with all phases of the warp sizing operation for cotton yarns and yarns produced from man-made fibers, appeared in the May, 1956, issue of this magazine. Reprinting of the entire series in book form is planned.

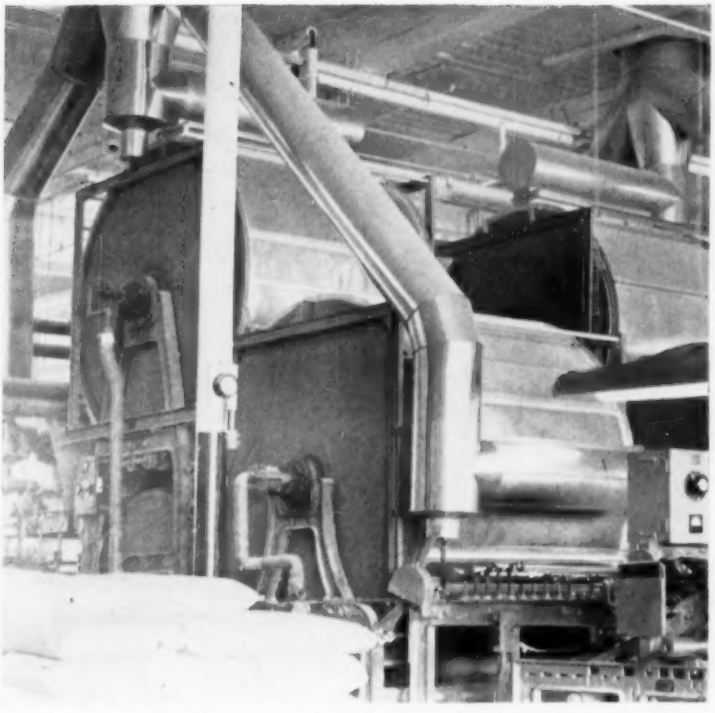
SIZING

visable, if not necessary, part of a slasher. It serves two purposes: (1) to keep the steam vapor from going all over the room, causing uncomfortable working conditions and dripping from the ceiling, and (2) to increase the efficiency of the drying operation. A hood over the size box serves only the first purpose; one over the cylinders, if properly designed, will serve both purposes.

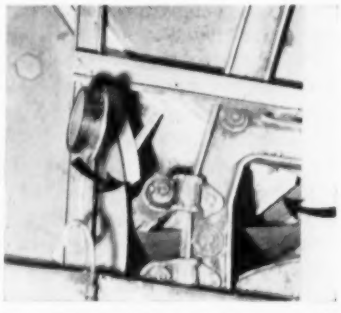
The hood should be so designed that any drips will not fall back onto the warp. To prevent this, the simplest solution is to have the air draw-off duct of the hood come off the side of the hood, rather than the top center, and furnish adequate blower power to keep the air moving rapidly. At the bottom and on any angles of the ducts, there should be clean-out openings.

Hoods should be cleaned out on shutting down for the weekend in order to prevent accumulation of dirty fly which will fall back into the size and on the yarns, often becoming pasted on the warp by the damp size.

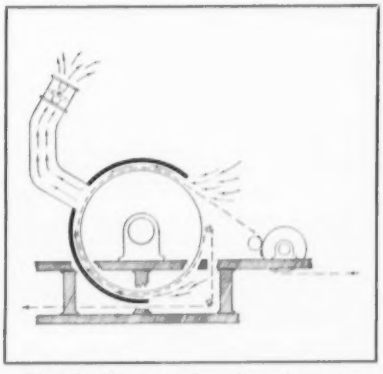
If there is any tendency for dripping off the bottom edges of the hood, these should be turned up into small gutters, and allowed to drain off the corners where no damage to the warp will be done. Of course, these gutters must be kept clean, or they will collect dirt, and the water will not flow, so that the drip will be dirty.



Shirley hood installed on 3-cylinder slasher, showing extent of coverage of slasher cylinders.



The Shirley hood covers as much of the slasher cylinder surface as possible and is fitted as closely as possible to the cylinders in order to give very rapid airflow.

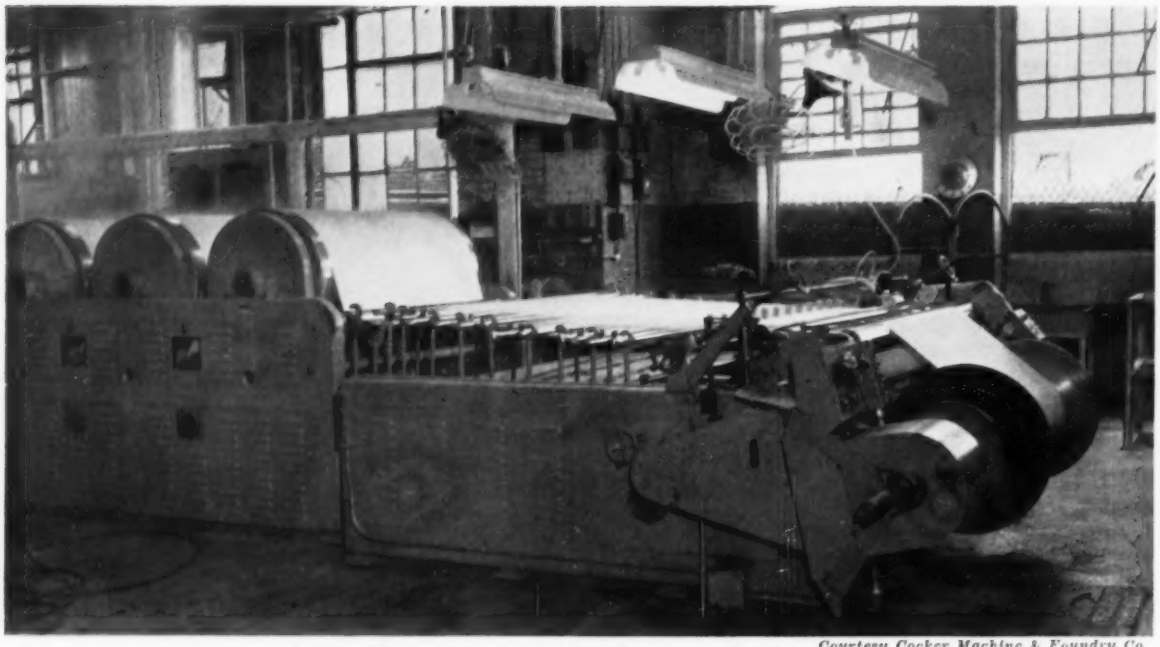


Sketch shows exhaust system on Shirley hood.

From an engineering point of view, the hood over the slasher cylinders should be as close to the cylinders as possible. It is desirable to have a rapid flow of air, in order to prevent the drip, and to remove the steam vapor as rapidly as possible as it forms. Assuming a fan pulling several thousand cubic feet of air per minute, if the hood is a foot away from the cylinder surface, the air will move only one-fourth as fast as if the hood is only three inches from the surface. And in the first case, some of the air going into the hood is not coming near the cylinder surface, while in the second case, most of it passes over the cylinder.

Perhaps the best design has been developed by the Shirley Institute in Britain. The Shirley hood goes as far around the cylinder as it can be carried without interfering with the yarns, and is built to come to within two inches of the cylinder surface. Along the edge of the cylinder is a sort of air gasket which prevents any appreciable amount of air from coming in the sides, so that most of the air flow must be over the cylinder surface. A 7½- or 10-hp blower pulls air at a very rapid rate over the warp, thus removing rapidly the steam vapor, and preventing the formation of a stagnant layer of steam over the yarn surfaces, which slows down the drying process.

With such a hood, drying efficiency may be stepped up to give increases in production of from 15 to 25%, and as much as 50% has



Courtesy Cocker Machine & Foundry Co.

Multi-cylinder slasher. Note cooling fans over lease rods.

been claimed. Such an installation would particularly benefit mills which are being pushed for slasher production. The principal requirements are careful manufacture in the shop, plus adequate blower capacity.

If this sort of hood is not practical for a particular operation, the nearest possible approach to this type of design will be the best.

Multi-Cylinder Slashers. Originally designed for rayon, the multi-cylinder slasher is beginning to invade the field of cotton sizing as well. These slashers have smaller, two-foot diameter cylinders. According to production needs, the slasher drying section may utilize five, seven, or nine cylinders in an upper and lower row. As many as 13 cylinders have been used on a slasher designed for heavy carpet warps. The cylinders are set close together so that as the warp is threaded from one to the next, most of the cylinder surface will be utilized without the need for contact rolls.

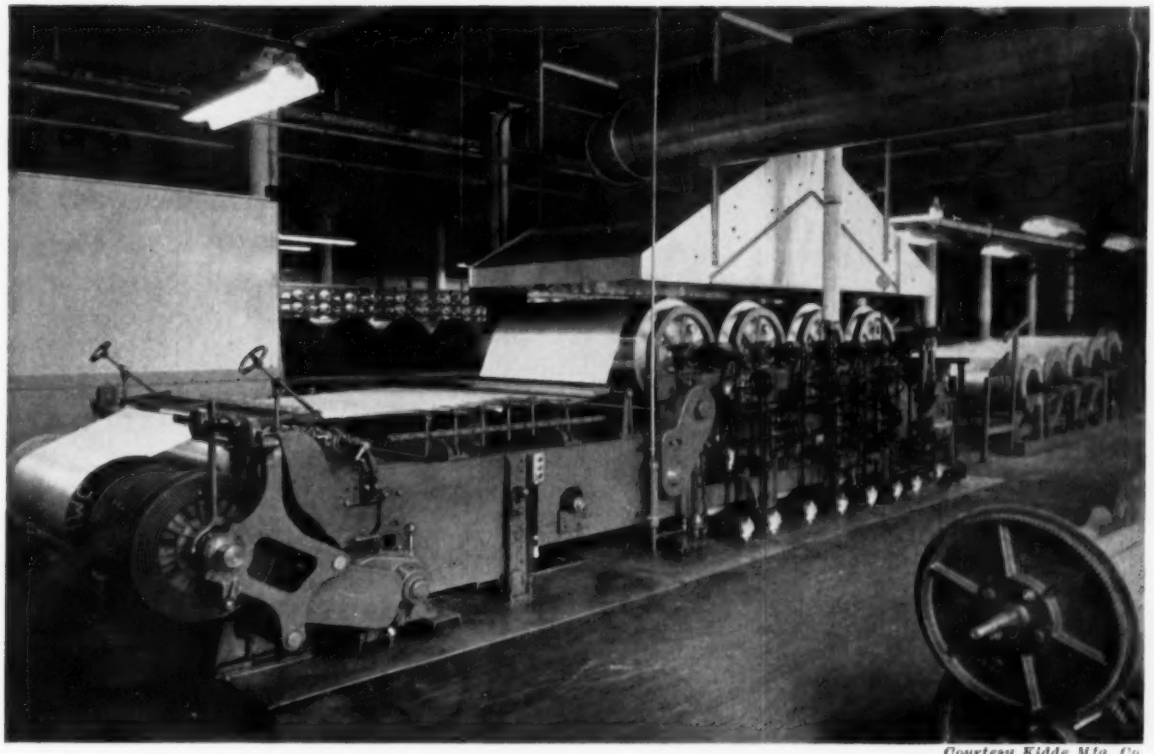
The multi-cylinder slashers are usually equipped with separate steam controls for each cylinder, although some may have group controls, as for instance a nine-cylinder slasher may have controls on three groups of three cylinders each. This is particularly important in slashing the more delicate rayon yarns, so that the first one or two cylinders could be set at a comparatively low temperature, to prevent sudden boiling of the size film, and the last cylinder or two could be run at lower temperatures, so that the final drying would not occur at such high temperatures with consequent damage to both yarn and size film. Often the last cylinder is run cold, so that the yarns will cool off somewhat before passing through the leasing section.

One of the reasons that prevented the wider adoption of the multi-cylinder slasher for cotton earlier, was that there were more cylinders on which the size could stick. The size is stickiest at a certain stage in drying, where it is neither very wet nor dry; and with the multi-cylinder slashers, it might be in this stage while coming off two or three cylinders. With the advent of Teflon coating of the cylinders, this objection is being overcome, as the size will not stick to the Teflon. Only the first two or three cylinders need be covered.

In rayon slashing the temperature run may be for a seven-cylinder slasher, something like: 190, 200, 210, 220, 210, 200 F, with the last cylinder run at room temperature. Lower temperatures are sometimes used on acetate filaments with the styrene polymer resins, while higher temperatures are often used on spun viscose yarns, sized with the rayon starch gums.

For cotton slashing, appreciably higher temperatures are being experimented with—up to 245 F or even 255 F. The small size of these cylinders allows a much higher steam pressure to be used with safety than may be used with the large-cylinder slashers. The cotton is not damaged by the high temperature, and as a matter of fact the yarn temperature never approaches this, since as long as there is moisture in the yarn, the evaporation of the moisture will keep the yarns cooled to below 210 F.

Whether these high temperatures do much damage to the size film on the small cylinders, has not yet been proved. It is possible that they may be being baked on one side, but the sides are alternated rather rapidly on the newer



Courtesy Kidde Mfg. Co.

Multi-cylinder slasher, showing hood, exhaust, and creel.

high-speed, small-cylinder slashers. One difficulty does appear: On slowing the slasher or stopping it for any length of time, the size is baked so much that it actually discolors to a light brown. There seems to be now a way around this, other than use of lower temperatures.

Drying Section—Hot Air. Up to the present the simpler operation of cylinder slashers and their lower heat and power costs have prevented wide adoption of other types in this country, despite claims of improved sizing. Work is continuing toward the development of an acceptable slasher that will not dry through a one-sided contact, and many more hot air slashers are now in use in this country than in pre-war operations.

There are a number of different designs of hot air drying chambers. In one type, the yarn passes back and forth between rolls about six inches in diameter, making about a dozen horizontal passes across the chamber before leaving the chamber.

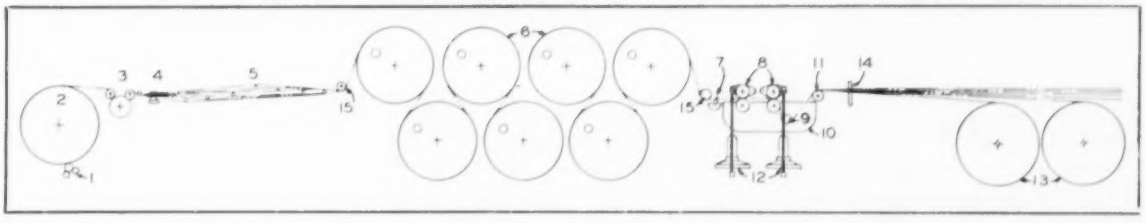
Other designs feature large open cylinders or reels on which the yarn passes through the chamber in the same way that it goes over the cylinders of a steam-cylinder slasher. These reels have large fan blades inside them, which aid the circulation of air as they turn. A number of fans are usually required to control the air flow over the heating elements and through the chamber.

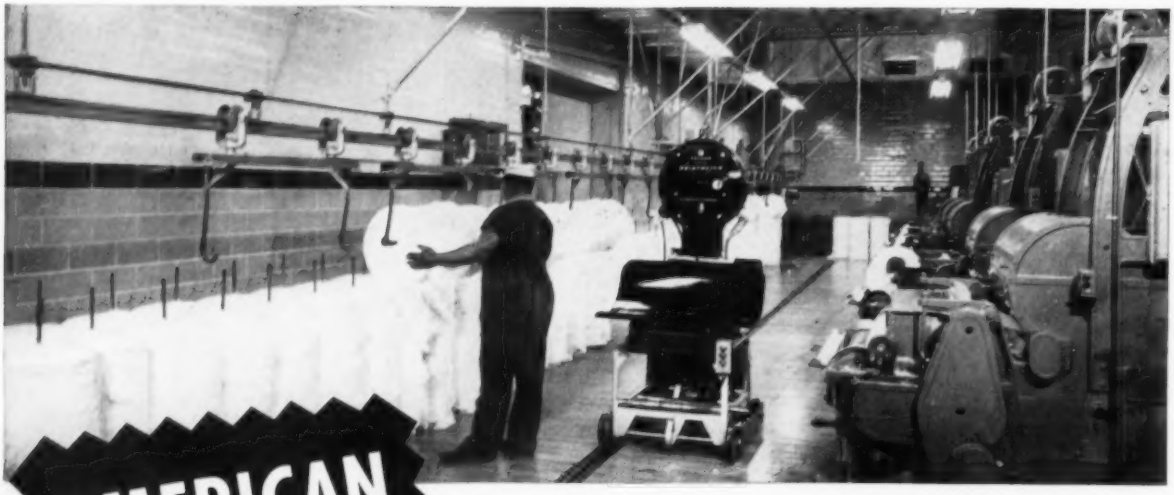
The heating element may be steam coils equipped with fins for heat transfer. Gas heat may also be used, in which case the combustion gases are mixed with air and led through the chamber.

Infrared drying has made its appearance experimentally. This may be done either electrically or by gas. For electric drying, banks

Cross-section sketch showing the principal components of one make of multi-cylinder slasher. Key to numerals (from left to right): (1) press roll; (2) loom beam; (3) drag roll (delivery roll) with calender rolls; (4) expansion comb; (5) leasing section—split rods; (6) drying cylinders; (7) cut marker; (8) squeeze rolls; (9) immersion roll; (10) size box; (11) feed roll; (12) pneumatic system for loading squeeze rolls; (13) section beams in creel; (14) hook reed; (15) guide rolls.

Courtesy Kidde Mfg. Co.





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Delivers 10 laps per train from pickers to cards

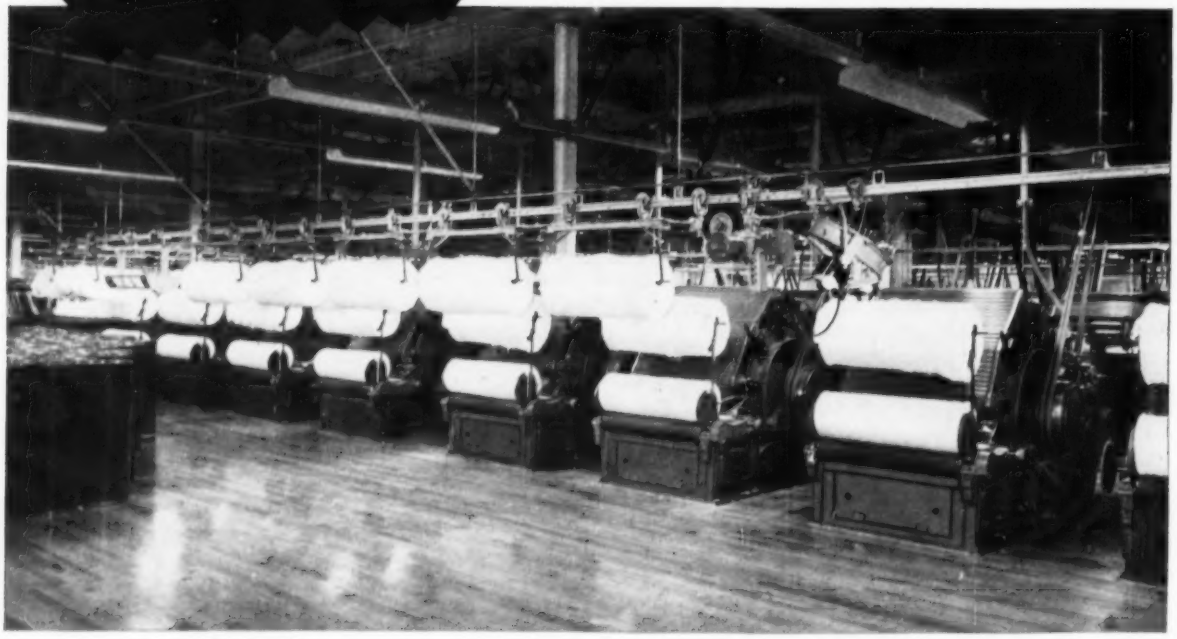
Laps move throughout the card room on American MonoRail trains consisting of 10 carriers propelled by American MonoTractors.

Carriers are loaded manually at the pickers and travel continuously over card creels until stopped by push button control.

Note the high velocity fan at the head of each train for card room ceiling cleaning.

American MonoRail engineers have solved many handling and cleaning problems in textile mills. Let them help with your requirements.

Write for copy of Bulletin C-1.



Member of American Textile Mfrs' Assn.

For Power Driven Conveyors, Use Landahl Chainless Conveyors

AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE, CLEVELAND 7, OHIO (IN CANADA—CANADIAN MONORAIL CO., LTD., GALT, ONT.)

of special lamps of 250 to 1000 watts are mounted either below the yarn, or on both sides. Reflectors are built in the lamps to direct the infrared rays. The principal disadvantage of electric drying is the comparatively high cost. One experimenter reported that it cost five times as much to dry the yarns with infrared lamps as with cylinders. The actual cost will depend on the cost of electricity, but, in any event, this method is not yet economically feasible.

With gas, the infrared rays are produced by heating refractory material to incandescence. A good deal of heat produced by the combustion gases also assists in the drying.

One type of hot air slasher is the Industrial Heat Engineering Co.'s "Direct Fired Warp Dryer." With this model, the warp makes 13 horizontal passes inside the drying chamber. At intervals, baffles are placed to increase the push of drying gases through the warp sheet. Due to the fact that the drying chamber is direct fired, and the combustion gases are used for drying, there is no heat loss in transferring of heat from one medium to another.

Another advantage claimed is that these gases contain only a very small amount of oxygen, and will therefore have very much less tendency to damage sensitive yarns. While this is true, still under normal conditions the damage suffered by oxidation on decreasing the moisture content from 50% to 7% is very small.

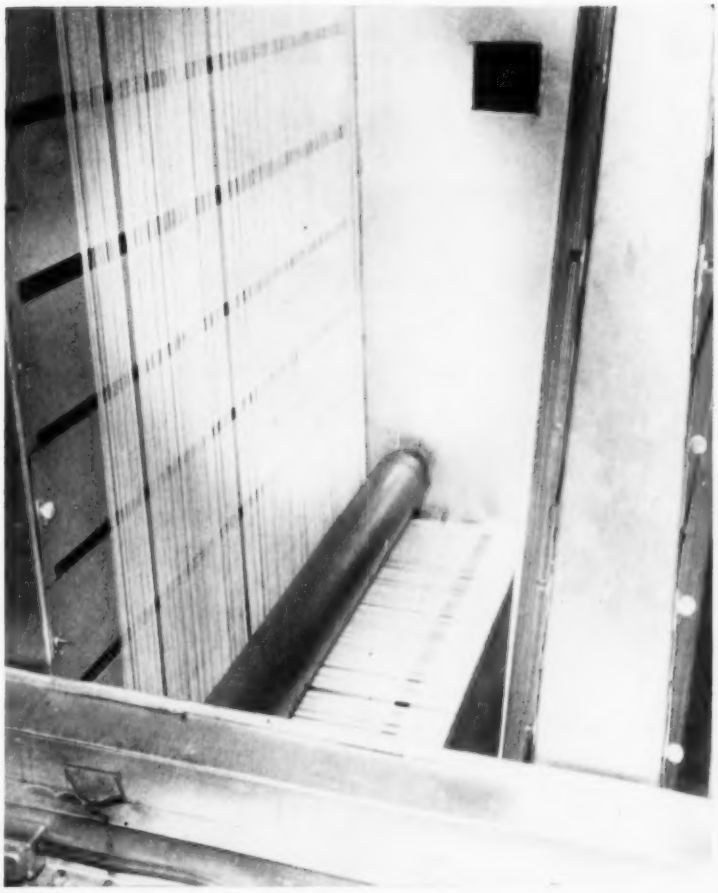
Fluted stainless rolls which guide the passage of the yarns give much less contact than an ordinary roll . . . less chance of size build-up on the roll, and less contact of hot metal with the yarns.

A damper operates to cut down the gas flow when the slasher is run on slow speed, and cut off the heat when the dryer box is opened, to permit immediate access to the warp, as well as to prevent over drying.

An evaporating capacity of up to 600 lb of water per hour is claimed, which will give under normal conditions a production of in the neighborhood of 600 lb of sized yarn.

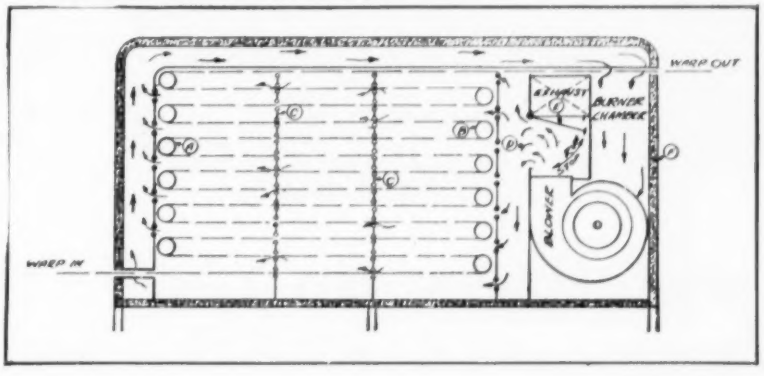
The Uxbridge "Gentle Air" slasher has a more complex system of heaters and blowers which circulate hot air, discarding some and drawing in new air continually. Only four contact rolls are inside the drying box, with the first so placed that a maximum amount of travel and drying is obtained before the yarn touches the roll. This is done to dry the yarn past the "tacky" stage before contact is made.

Wet splitting of the warp sheet is also utilized to minimize dam-



View of interior of hot-air drying chamber, showing yarn passing over air vents through which hot air enters the chamber.

Schematic diagram of the "Direct Fired Warp Dryer." A, fluted rolls driven; B, fluted rolls idle; C, baffles; D, splitters; E, automatic cut-off damper; F, insulated housing.



14" BOBBIN...12" BUILD...

CARRIED BY THE NEW JUMBO TWISTER by MEADOWS

This page is too small to show full size the package the new Meadows Jumbo turns out. But here's an unretouched picture: 14" overall; 12" build . . . a 9 lb. package of knotless yarns on numbers as coarse as 8/8. The Jumbo is a 10 gauge equipped with 8" diameter rings.

COMPLETELY NEW . . . COMPLETELY ANTI-FRICTION

Meadows twisters are available from the smallest to the largest gauge and ring size; will run bobbins from 10" to 15". They can be run at higher speeds than any competitive twister.

They are as completely anti-friction as a frame can be made, with ball bearings and rollers at friction points. Sturdy steel construction. They will serve you better.

Consult us if you have twisting problems.

MEADOWS MANUFACTURING CO.
ATLANTA, GA.

age to the dried size film.

With most hot air dryers, a very important point is control of air to give maximum flow with a minimum of strong irregular drafts, since these will cause rolling of the yarns and resultant broken ends at the split rods. The Uxbridge slasher has solved this to the extent that with only 14 yards of warp in the dryer, a capacity of 1,500 pounds per hour has been obtained.

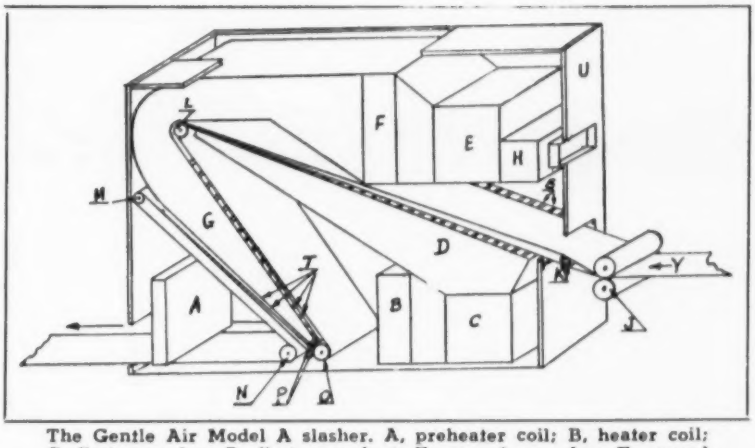
Both of these dryers offer the usual advantages of hot air slashers. The yarn is dried from all sides, and thus dried evenly, without an "ironing action," so that with the same size film, a yarn with less stiffness is obtained.

(It is claimed by some exponents of hot air slashing that can drying produces "flat" yarns. No cases of this have ever been observed in studies in our laboratories with cross sections examined under the microscope. Cotton is too strong and flexible to be flattened to any extent without a lot of pressure. On the other hand, contact drying probably does overheat one side of the yarn.)

One of the greatest advantages of hot air dryers is that the heat can be turned off on stopping the slasher, so that there is no damage from overdrying or baking of the yarns.

It is claimed that there is less matting of fibers with hot air slashers, since the can surfaces push exposed fibers together, and bake them in the film. Therefore, even where wet splitting is not used, splitting at the lease rods is easier. It is obvious that excessive tearing of the film at the lease rods will give a rougher yarn, defeating some of the purpose of sizing.

With well-insulated drying chambers, there is much less radiation of heat into the room than with cylinder slashers, so that the slasher room is a more comfortable place to work. This does not mean, however, that heat efficiency is greater. It is necessary to discharge a certain amount of hot air along with the evaporated moisture, which produces a loss of heat such that the hot air slashers require about twice the steam per pound of yarn that cylinder slashers require.



The Gentle Air Model A slasher. A, preheater coil; B, heater coil; C, first pass fan; D, first pass duct; E, second pass fan; F, second pass heater; G, second pass duct; H, exhaust fan; J, size box rolls; K, wet split rolls; L, first roll; M, third roll; N, fourth roll; O, second roll; P, inside split rolls; S, first pass nozzles; T, second pass nozzles; U, insulating panel; Y, yarn sheet.

A much wider range of control is obtainable with gas or air dryers than with cylinders. While the cylinder surface remains constant, the heat input can be varied only slightly by varying steam temperature or pressure. Most of the control with a cylinder slasher is obtained by varying the speed of yarn travel, while with hot air slashers, not only the speed but also the heat input may be varied over very wide ranges.

Among the other advantages of the hot air drying sections is the elimination of the rotating steam joints, which must be very carefully aligned or they will require a lot of maintenance. Balanced against this is the fact that the hot air chambers are more difficult to keep clean than the cylinder dryers. The air screens and the heating coils must be kept clean to maintain a reasonable production rate.

Another disadvantage of the hot air system is the greater tendency of the yarns to roll around each other in the long passes between guide rolls, which is aggravated by the turbulence of the air currents. This can be minimized, however, with proper air flow design. An increase in tension will help keep to a minimum the rolling of the yarns, but this will then result in excessive stretch while the yarns are damp.

Although hot air slashers are not used to any great extent in this country for slashing filament yarns, they are widely used in Europe. There is no theoretical reason why they should not be applicable in this field if the air flow is sufficiently smooth to keep from disturbing the yarns.

Several other U. S. manufacturers have developed new models of hot air slashers, including West Point Foundry & Machine Co., Saco-Lowell Shops, Inc., and Proctor & Schwartz, Inc.

Cooling Fans. A cooling fan is placed on most slashers just beyond the drying section to circulate air through the warp sheet and cool the yarns. This is necessary to insure that the yarn is at an even temperature while being wound on the loom beam, otherwise the contraction of the yarn on cooling on the beam will result in uneven tension. Also, the fan helps remove the last of the free moisture.

On multi-cylinder slashers, where the sheet of warp yarns is delivered to the head end from above rather than below, use is often made of a large electric fan mounted over the drag roll blowing back across the leasing section.

Carrying Roll. The carrying roll, or measuring roll, is actually a guide roll, taking the warp sheet from the last cylinder, or from a previous guide roll, and lining it up so that the yarns will move on a level line to the top of the calender roll. It is generally so

Executives with dirty hands

Their hands aren't dirty because they're careless. They're dirty from working in textile mills on all kinds of problems. When trouble breaks, they don't stand idly by and merely suggest what may be wrong.

They find the answer by rolling up their sleeves and working side by side until the problem is licked. Who are they? One is an overseer—perhaps one of your overseers. The other is one of Staley's Textile Field Representatives.

Their broad experience, their technical knowledge qualify them as experts by any standard. Working together, they form an unbeatable team.

Yes, textile overseers know they can depend on Staley's for technical service. And just as important, they know, too, they can rely on Staley's for a complete line of tailor-made starches, gums, and dextrins . . . second to none.

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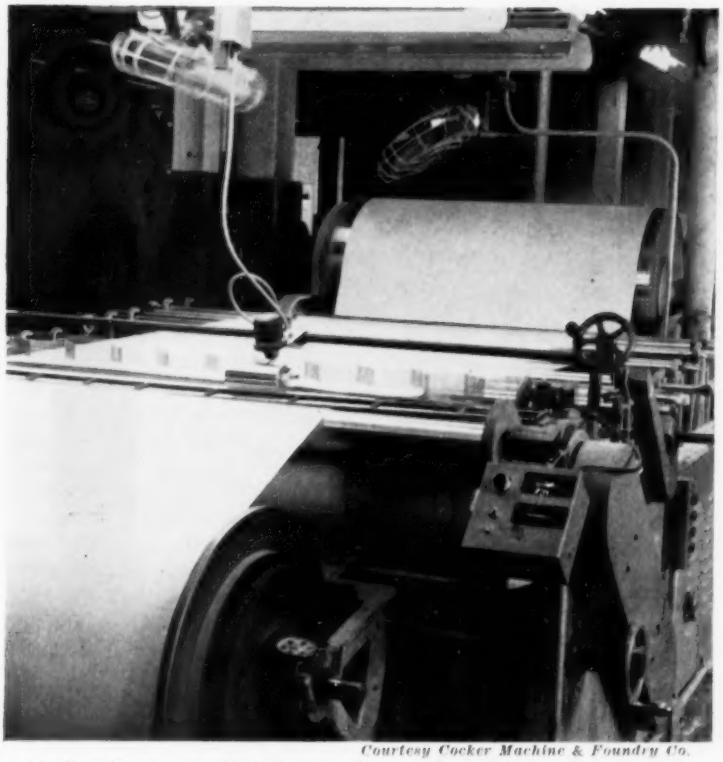


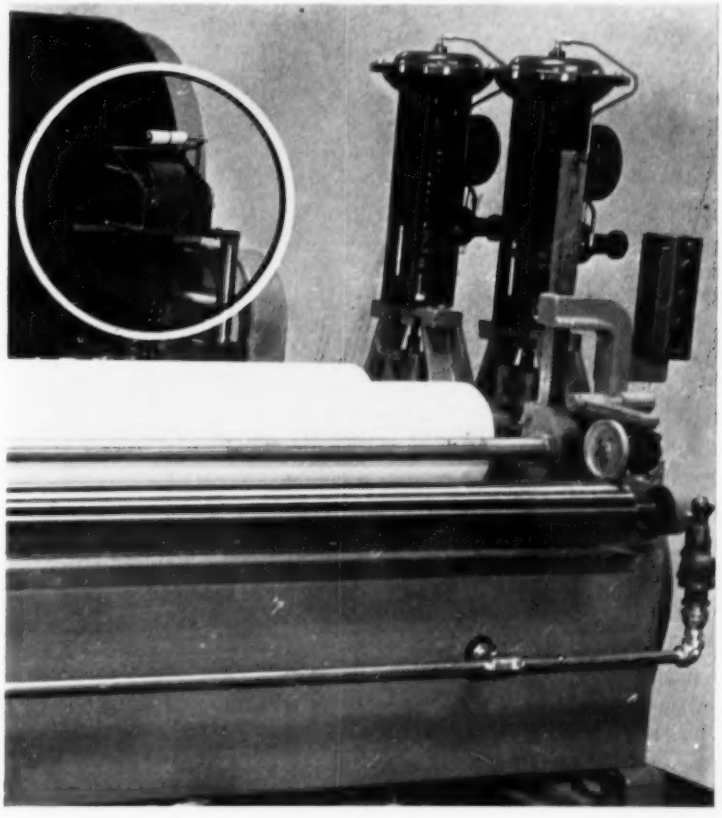
Courtesy Cocker Machine & Foundry Co.

Cooling fans insure that the yarn is wound on the loom beams at an even temperature, thereby reducing contraction of the yarn on the beam. Note here cooling fans above warp on multi-cylinder slasher.

Cooling fan below the warp on large cylinder slasher.

placed that the sheet will be delivered to the "busting" rod on a line with the center axis of the latter. It is called the measuring roll, as often a yardage counter is run off this roll.

We might note here that some operators prefer to count yardage and make their cut marks on the rear of the slasher, so that the cut marks will be dry by the time they are wound on the loom beam. Obviously, a wet cut mark will mark off on adjacent layers, and cause confusion in trying to determine just which is the correct mark. On the other hand, if the cut lengths are marked at the back of the slasher, account should be taken of the fact that there is some stretching of the yarns between the front and the back, which might cause errors in marking of the lengths. This is, of course, not as important on cotton as on rayon, since cotton does not stretch as



On this multi-cylinder slasher the position of the cut marker (in circle) is such that a mark is made on the sized yarn sheet as it leaves the last drying cylinder.

Courtesy Cocker Machine & Foundry Co.

THE OLD BOSS DYER SAYS:

*Medium shades show up neps more than light or dark shades. Different types of dyestuffs may make neps easier to be seen. Sulfurs bring out the neps more than other dyes.

* MORTON MACHINE WORKS, INC., brings you the Old Boss Dyer with a timely tip on dyeing each month.

MORTON also brings you the finest line of dyeing, bleaching and drying equipment available today—THE MORTON SYSTEM.

There's a MORTON SYSTEM installation near you . . . and our best selling point is a trip through a mill presently using MORTON equipment.

May we hear from you?

MORTON MACHINE WORKS, Inc.

COLUMBUS, GEORGIA, U. S. A.

Manufacturers of the MORTON SYSTEM Machinery for Dyeing and Bleaching of:
BEAMS -:- PACKAGES -:- STOCK -:- PIECE -:- TOPS
VALVES — PUMPS — BEAM AND PACKAGE EXTRACTORS AND DRYERS — DYE BEAMS, ALL MAKES AND DESIGNS — DYE TUBES — DYE SPINDLES — TUBE SPACERS — STAINLESS STEEL DYE TUBES
CUSTOM BUILT TANKS TO CUSTOMER'S SPECIFICATIONS

much as does rayon or the synthetic fibers.

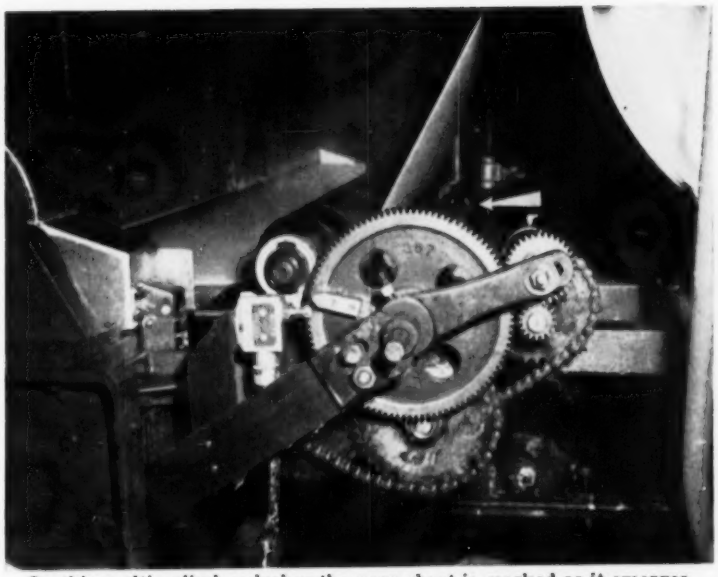
Split Rods. Since the warp sheet can readily be split into only as many fractions as there are section beams (due to the fact that leasing is done from these beams), the total number of split rods is one less than the number of section beams. These rods should be kept smooth at all times, and should they become grooved by the wearing action of the threads, they should be turned down and polished, otherwise chances of breaking out ends here are greatly increased.

Also, a rough, grooved rod will roughen the yarn surface and greatly increase slasher shedding. Chromium plating of these rods improves their wearing characteristics.

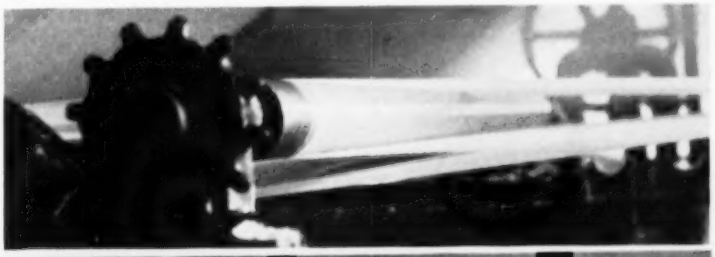
A rather large split rod of about 3 or 3½ inches in diameter is used as the first split rod (or "busting" rod) to give the first separation into two sheets. This larger diameter causes the yarn to separate farther back from the rod, which lessens the chance of kinks. On extra heavy sets, two large rods may be used to divide the sheet into three parts.

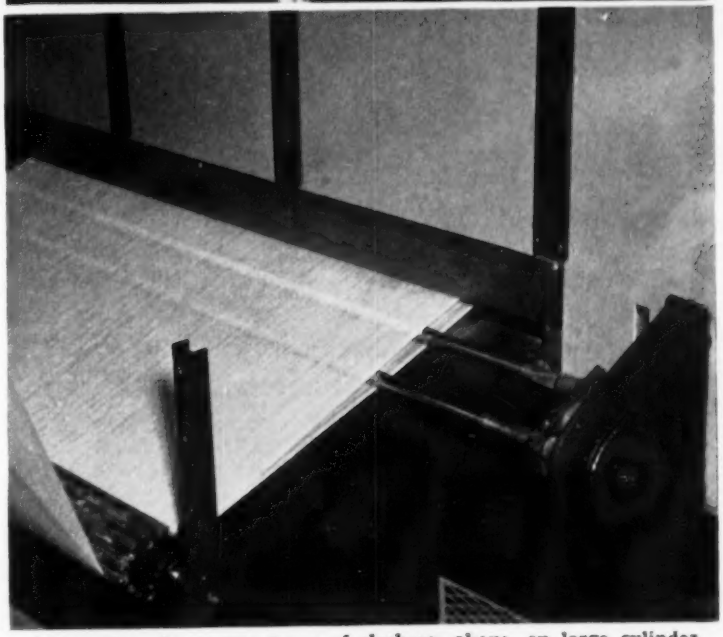
For heavy sets it is also desirable to have a split rod dividing the yarn into two portions just before it goes to the drying section. This should be a rod about 1½ inches in diameter, on the end of which is a pulley for the purpose of belting this rod to the shaft from the size box. This rod should be turned to decrease the tendency of size to collect on it. The motion of the rod should be slower than the sheet of yarn, to prevent laps It should be cleaned from time to time. Through the use of this "wet split rod" the threads separate easily on the front of the slasher and cause fewer break-outs. Occasionally as many as three or four wet split rods may be used.

(Continued next issue)



On this multi-cylinder slasher the yarn sheet is marked as it emerges from the size box. Arrow points to dauber in center of machine. Note "hunting tooth" on large gear of measuring mechanism in foreground. When a cut mark is made, it trips the switch at the left which rings a bell at the front of the slasher to warn the operator so that he can slow the machine down and see the mark in time to stop for doffing.





Wet split rods on two types of slashers: above, on large cylinder slasher; below, on hot air slasher before yarn enters drying chamber.

Editors' Note

It has been brought to our attention that the **Griffin Size Box** shown on page 189 of the September, 1957, issue (Warp Sizing, Article 17) was built by **The Textile Shops** of Spartanburg, S. C.

Another manufacturer was erroneously credited for this. We regret the mistake and hope that no one was inconvenienced by it.

Get LOFTIER WHITER WOOL

with Gentle-as-a-lamb NOPCO SYNTERGENTS

An original concept in wool scouring has been made possible by Nopco's two new Syntergents, plus a new scouring technique developed by the Nopco Laboratories.

Nopco's wool scouring detergents make it possible to scour efficiently at low temperatures (120° to 130° F). The result is undamaged wool fibers — loftier and whiter wool. The improved physical characteristics imparted to the wool stocks benefit all subsequent processing steps.

Tests at leading mills have proven the Syntergents superior on a cost performance basis to all other modern scouring agents. The low temperatures needed also give the mill an operating economy through lower fuel costs. And—because of the scouring efficiency of the Syntergents — an increased yield of whiter wool grease is obtained.

For raw wool scouring choose Syntergent 35-K. For carpet wools, use Syntergent 35-T. Both give maximum results at lower costs when used with the Nopco scouring process.

The Nopco scouring process is adaptable to present mill equipment. No special equipment is necessary. Demonstrations may be arranged by contacting Nopco's Textile Chemicals Department. A Nopco technical service representative will be sent to conduct the demonstration.

1907–1957 50 Years OF PROGRESS IN CHEMISTRY NOPCO

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by Calvin Hall

Exclusive

Running cotton waste?

Here are some pointers for making quality yarns

THE inconsistency of cotton waste presents a multitude of problems in the opening room, and from my experiences in processing such waste I am listing those factors which I consider to be most important to quality in the finished article.

Although most opening equipment was originally designed to open gin-packed cotton, with a few adjustments in settings and speeds the same equipment can be used satisfactorily in opening waste in the form of roll strips, ribbon comber noils, compressed comber noils, etc.

Waste usually is run from blends containing two or more types, or sources, of the raw product. This blending is done because generally a mix of 100% comber noils or of 100% strips simply will not produce a yarn which will run well in the plant, or will fill a market need. Blending lends character to the yarn which is not to be obtained by any other means.

Flat strips are needed for staple length and yarn strength. Comber noils are used to impart a brighter, cleaner appearance to the finished yarn. Cotton (first-run), when added, is used to give further yarn strength or running quality.

Flat strips in roll form can be opened with a #7 feeder hopper by using a Sargent comb running at a relatively high speed. The comb should be set as close to the spike apron as is possible to prevent the roll strips from passing under the comb. The strips by nature will mat down into the spikes easily. To control the quantity of stock delivered by the opener, speed up the apron instead of opening the comb.

Comber noils, other than the compressed ones, need no special card or machine to open them to a form which can be blended easily with other forms of waste.

To give a uniform appearance and strength to a given blend, special care must be used to assure feeding is done in the proper proportions of each type of waste. One way of gaining this is to set up certain hoppers, in a line of hoppers, to run each type of waste. Should the form of any type of waste be changed, the openers should not be operated until the hoppers are set up to give the right proportions of each type of waste.

Blown strips will not feed at the same rate as roll strips under given comb settings and apron speeds. This statement also applies to compressed and flat bale cotton.

Blown comber noils will not feed at the same rate as ribbon comber noils. This characteristic difference between the types of waste is the chief factor to watch once the hoppers have been set up.

Some mills use imported waste such as Egyptian noils or strips. The imported waste usually comes in high-density bales, and must receive special care if it is to be opened to a proper state.

Usually a special opener is needed to tear up the matted Egyptian stock. The best opener I have found for this is a #7 feeder hopper in front of a #7 feeder. The regular hopper will feed directly to the converted hopper.

This hopper is equipped with two spike aprons running in opposite directions. The second spike

★ ★ ★ ★

NEWS the Platt/Bright twister cabler

for rayon and nylon tire cords

HIGH QUALITY CORD.... LOW PRODUCTION COST

This new machine is the result of a number of years of development work carried out in close collaboration with John Bright & Bros. Ltd., Rochdale, and has been designed to provide the most effective method of producing tire cord from continuous filament on one machine in a single operation. It offers the following advantages:

1 HIGH PRODUCTION OF TOP QUALITY, UNIFORM CORD

An installation of 24 machines of 100 spindles each will process 1,000 lb. per hour of 2/1650 denier rayon cord, 12/12 T.P.I.

The standard machine produces 4/5 lb. packages of finished cord, and a package of up to 9 lb. can be accommodated if desired.

2 ECONOMY

Small floor area — over 1 lb. of finished rayon tire cord per 10 hours per sq. ft. (including passageways).

Minimum labor requirements.

Low waste losses.

High machine efficiency.

Minimum cleaning and maintenance time.

3 THE ULTIMATE IN SIMPLICITY

No cabler is easier to operate.

This machine, operating under mill conditions in England, is open to inspection by appointment.

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apron is mounted over the first apron which is kept in its proper or original position.

The opposed aprons approximate the action of card flats to give a good opening action. The apron speeds should be the same. A stripper doffer is installed at the top of each apron.

Finally, wherever possible, double blend the waste. The small extra cost will pay off in the better spinning qualities introduced and in the improved quality of the finished yarn.

Joanna (S. C.) Cotton Mills delegates to the conference included (l to r): Cecil Bishop, cloth room overseer; H. G. Boyce, spooler room overseer; David Boland, assistant personnel director; Rolfe Clark, drapery department overseer.

Nat S. Welch (left), personnel director at Whitmire plant of J. P. Stevens & Co., Inc., poses with more Joanna men (l to r): J. M. Rowland, spinning room overseer; C. N. Franks, card room overseer; J. P. Sloan, personnel director.

When is a supervisors' training program needed?

Dan River's Schollenberger told Blue Ridge conferees how to decide

Staff report

■ Supervisory training programs should be justified by sound objectives, C. J. Schollenberger, director of training of Dan River Mills, Inc., told the nearly 1100 industrial management and operating executives who attended the 38th Southern Industrial Relations Conference at Blue Ridge, N. C.

In establishing whether or not a program is needed, Mr. Schollenberger suggested that the following questions be asked:

(1) What is our labor turnover?

(2) Is it above normal?

(3) Are our grievances in line or are they abnormal?

(4) Are our production schedules being met?

(5) Are our in-plant or interplant communications satisfactory?

(6) Do our supervisors understand all the intricacies of labor analysis and cost controls?

(7) Are our costs in line?

(8) Do our supervisors know how to instruct their subordinates in a satisfactory and efficient manner?

Mr. Schollenberger emphasized that a program that meets the needs of one company does not necessarily suit the needs of all companies. Individual problems must be analyzed to find the solution to meet the requirements, he continued.

Lack of interest in training may be overcome by showing trainees the connection between the things being taught and their jobs—present and future, the speaker said.

The three foundation stones for performance - centered training may be set forth as follows:

(1) Remove the obstacles to growth. Give the trainee an idea where he is going.

(2) Improve his job skills. Help him obtain the tools of his trade—decision making and how to utilize human resources.

(3) Modify his job situation. Help him cut the cloth to fit the pattern. Utilize his strength and help him overcome his weaknesses.

Take time to plan the training program to suit individual needs, Mr. Schollenberger advised.

Several members of the board of directors of the Southern Industrial Relations Conference are textile executives. Pictured here with Board Chairman Charles R. Younts (front row center) of Plantation Pipe Line Co. are: Front row—Erwin R. Lehmann of West Point Mfg. Co.; Mr. Younts; and T. M. Forbes, Cotton Manufacturers Association of Georgia. Back row—Rudy Herrington, U. S. Rubber Co.; W. Gaines Huguley, F. W. Poe Manufacturing Co.; Fred Gronemeyer, Chemstrand Corp.; D. G. MacDonald, Du Pont; W. F. Winders, Tennessee Eastman Co.

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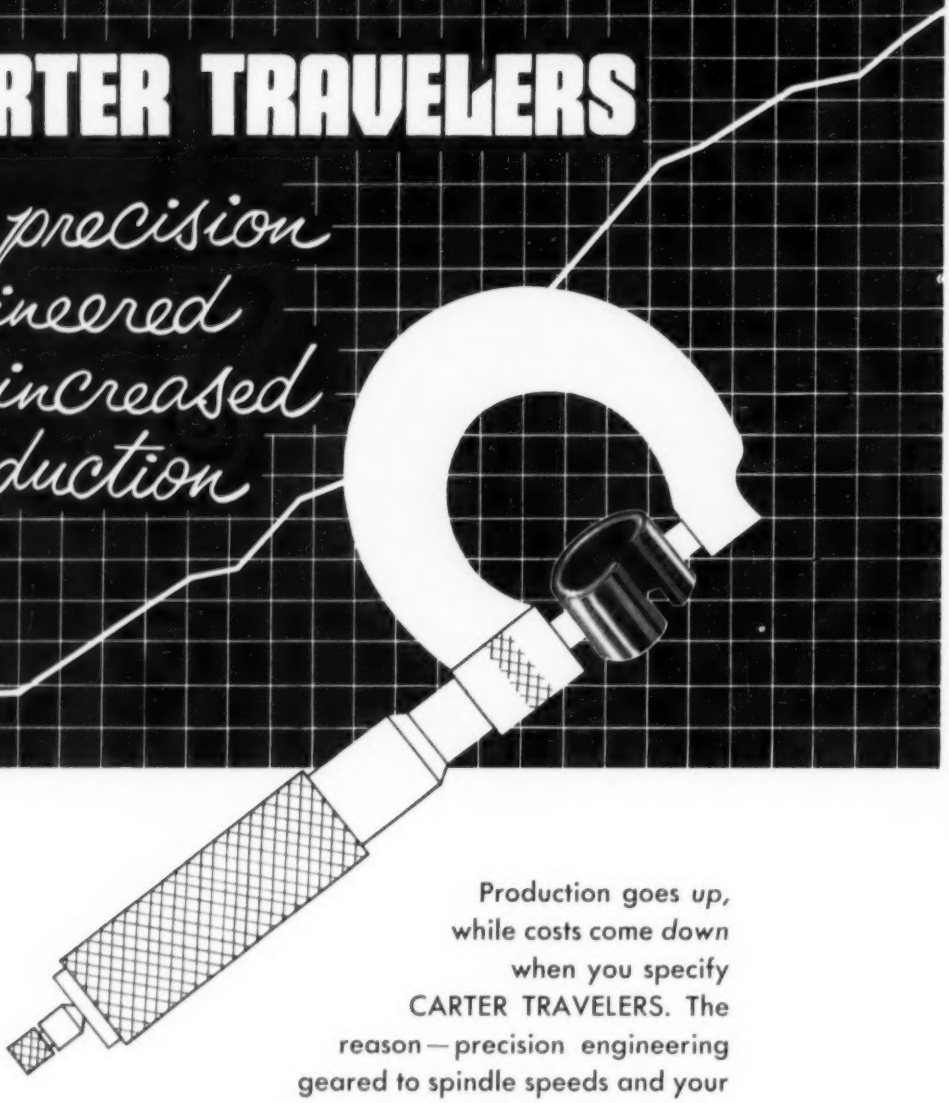

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The heavy hand of "Uncle Snoopy"

"A bird in the hand is the noblest work of God." So goes an old proverb

by Ringgold Arden

Exclusive

THOSE whose incomes are received in the form of paychecks frequently have no idea how deeply the federal government bites into their incomes. It seems incredible that such should be the case, because any intelligent man ought to know how much his taxes are; yet we have constant testimony from employers that their workmen don't know how much tax they pay, and don't care.

The labor unions have, of course, harped so insistently on "take-home pay" that their members have often been indoctrinated to ignore all deductions on a paycheck and simply consider the net figure as the total income. After all, what a man gets when he cashes his check is actually his income.

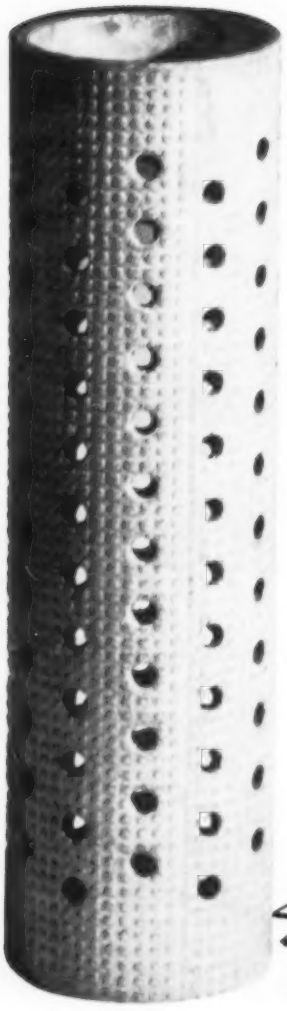
This attitude toward taxes has caused a great deal of inflation, and will cause more, because the great bulk of income taxes is paid by the large mass of payrollers who make less than $5000 a year. This large group also constitutes a tremendous mass of voting power, and unless these people do understand what taxes are doing to them, there will be little urgency in Congress to lighten the tax burden.

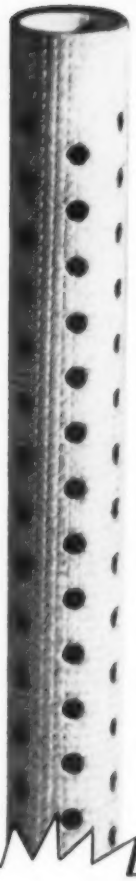
IT IS the business man who represents a trifling percentage of the population, who best understands what our present socialistic income tax system is really doing. The man who makes a fairly substantial income, and who actually has to figure his taxes and send the government a check for the amount, is brutally reminded four times a year about the incursions that are being made on his bank account.

"Incursions" is probably a good word to use, because in the upper brackets, our tax system is nothing but confiscation, which is a polite term for robbery. The business man can undertake nothing without figuring the "tax angle." This is usually the one overwhelming fact that governs anything which has to do with money.

Every now and then Congress sheds a few crocodile tears over the plight of the small, independent business man, and politicians loudly claim that he must be helped. The popular form of this help is to offer to lend him government money at a little less than the normal rate of interest.

Nobody ever suggests helping the independent business man by offering him a fair and honest income tax system. If he makes a





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SONOCO expands its line of quality DYTEX tubes with the addition of the DYTEX "L" Tube. This new tube, a product of SONOCO research, has passed critical evaluation by leading mills.

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SONOCO DYTEX Tubes are now available in base colors of brown, blue, green and tan. For yarn identification, the colored tubes may be used and tubes can be supplied with different color rings on the ends.

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little money and would like to expand his business, the government gleefully takes most of the money away from him and then magnanimously offers to lend him some public money, which he would probably never be able to pay back, because the government will again take away from him most of any profit he makes through the investment of that money.

PUBLIC OPINION polls have several times questioned the ordinary citizen on the subject of income tax rates, and these polls have consistently come up with the news that the ordinary voter hasn't the slightest idea how the government confiscates the money of the successful business man, and it seems that the typical voter would cheerfully sponsor an income tax limitation law.

Not only are the tax rates exorbitantly high, but the minions of Uncle Snoopy are constantly prying into the affairs of any successful business to see if they can't keep it from being successful. Tax collectors have a tremendous amount of power over the operation of business, and an arbitrary ruling by some clerk from the Bureau of Internal Revenue who is examining a tax return can destroy the profit accruing from weeks or months of work on the part of a hard-pressed business man.

There is, of course, a theoretical appeal from these rulings, but the appeal is usually meaningless unless it involves a sufficiently substantial sum of money to bring the matter before a Federal District Court. The appeal is usually handled by a Tax Court, which is a part of the machinery controlled by the existing Administration, and there often appears to be a very cozy understanding between government departments as to the impropriety of stepping upon each other's toes.

CONSIDER how the heavy hand of Uncle Snoopy falls on the man who for generations was the backbone of American business. This man either owns his own business, or it is owned by himself and a few associates. If it is the kind of business which is really beneficial to the United States and its people, it is an unusually successful business, and the owner makes a substantial amount of money.

The federal government now steps in and takes 52 per cent of what his corporation makes. If the owner of the business chooses to pay some dividends from what is left, the tax rate on these dividends may range up to 91 per cent, so that out of an original income of, say $500,000, the outright corporation tax is $260,000, and if the owner of the business pays half of the remaining $240,000 in dividends, the tax rate could be quite easily 80 per cent or more, so that this particular taxpayer managed to salvage $145,000 out of his half million.

Of the $120,000 he paid himself in dividends, he may have from $20,000 to $25,000 left, and that is not actually his money, but is in a way merely held in trust for the Socialist State, because the nominal owner of the money can not give it away at his own discretion. If he dies and this money becomes a part of a sizable estate, up to about three-fourths of that can go into the federal treasury.

ALL OF THIS, of course, is in accordance with good socialist thinking, which holds that all property really belongs to the State, and that the citizen is only granted temporary use of it. The heavy hand of Uncle Snoopy is therefore pushing us deeper and deeper into socialism all the time.

Anybody who possesses creative ability, and the faculty for multiplying wealth, is looked upon by good old Uncle Snoopy as that "bird in the hand," which has been declared to be the noblest work of God.

Stripping this class of people of what they have produced does not yield enough total money to make any appreciable difference in the income of the federal government. The stripping seems to be going on merely for the furtherance of socialism, and we are getting deeper and deeper into it all of the time.

These steeply graduated income taxes were originally put forth as a socialist measure for the admitted purpose of destroying the wealthy classes. This may have been a praiseworthy program in European countries where a few privileged families had got hold of practically all tangible property, and were hanging onto it by special laws governing its inheritance. This type of taxation is highly injurious in a country like ours where it practically guarantees that the small business man will stay small, or go broke.

A recent news item set forth that a man making $85 a week has to work about twelve and one-half hours each 40-hour week just to pay his taxes, and that amounts to about 31 per cent of his income going for taxes.

Many of these taxes are so completely hidden, and so endlessly pyramided, that practically any one who has not made a careful study of the subject has any real idea of the actual extent of taxation. Uncle Snoopy is into everything, and piles tax upon tax, so that taxes are actually collected on taxes and not once, but many times.

The citizen is, of course, lulled into a partial state of uneasy security by the opiate of government spending. Practically no public operation of any size can be undertaken anywhere until the local agency interested in this operation has found out how much the federal treasury will con-

(Continued on page 177)

Mill Presidents

Please Note

The House Ways and Means Committee will hold public hearings on taxes on January 7, 1958.

Business men are invited to appear and testify. Applications to testify must be submitted to the Committee by December 2.

Between now and the December deadline, the leading textile organizations ought to be deciding whom they would like to have represent them at the hearings, and should get their applications filed.

CELANESE

announces

TYPE-F ACETATE

new modified filament yarn providing greater richness and luxury of hand to your drapery and upholstery fabrics

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#35W TYPE-F BRIGHT
4 LB. CONES OR BEAMS

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In today's competitive drapery market, Type-F acetate has special importance.

Engineered for increased surface coverage and greater bulk, Type-F produces a superior fabric with the same amount of warp yarn. In popular antique satins, for example, more richness in both appearance and hand is achieved and therefore better quality and consumer value.

Type-F, also engineered for upholstery fabrics, works easily into the widest range of constructions, assuring excellent color and fashion at volume price.

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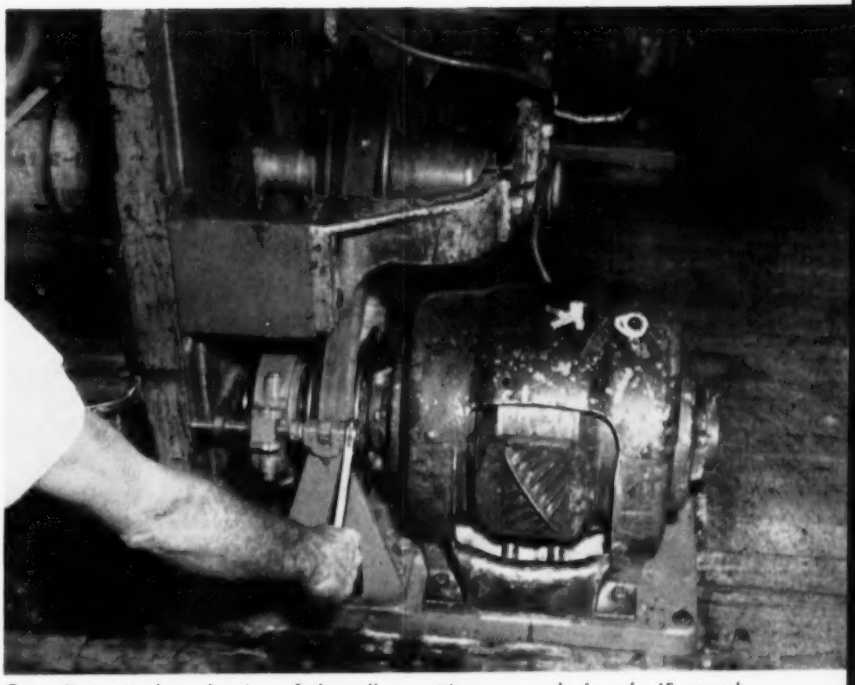
TYPE-F ACETATE . . . A Celanese CONTEMPORARY FIBER

Here's the way a multi-count synthetics yarn mill was able to

Save time in spinning



One adjustment alters the sizes of the pulleys: settings are made in only 15 seconds.

Staff prepared Exclusive

ONE prominent South Carolina mill changes speeds while spinning frames continue to run; a variable speed drive permits adjustment "on-the-run" and simplifies the speed changing operation.

The new drives give less trouble with maintenance and downtime in that approximately 50 frame-hours per week were lost with the old drive. This lost time was attributed to maintenance as well as to speed changes; now the mill loses no time for either. The only maintenance required is greasing once every 10 days. Fifty frame-hours are equivalent to $100 per week in terms of more production with the same labor cost, according to a mill spokesman.

Speed adjustments are made in 15 seconds, and there is less maintenance required on these drives compared to those previously used in this mill. There are fewer parts on the new drive, according to a mill spokesman. One adjustment alters the sizes of the two pulleys.

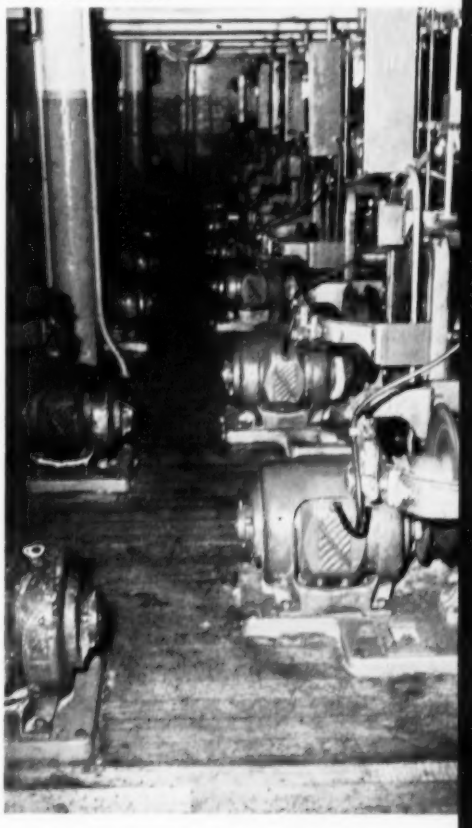
A single belt is used on the pulleys—a feature well liked in this mill. An adjustable type of pulley was formerly used but the speed range was not sufficient and maintenance was too costly. Furthermore, the old drives required from 15 to 30 minutes to make a speed change and the frame had to be stopped for the change.

This is a multiple counts synthetics mill spinning 35 to 40 different counts ranging from 4s to 40s. Every frame in the mill is changed the equivalent of once each month.

Costwise, the new drives are one third more expensive than the drives they are replacing. However, the mill can justify the cost of the new drives on maintenance alone, according to one mill official. The new drives pay for the difference in price in about two years.

The new Vari-Spin drives were supplied by Reeves Pulley Co., and have been in use on Saco-Lowell conventional spinning for about two years. The mill is so pleased with results that the drives have been specified for new frames being put in.

All of the mill's existing frames are equipped with this drive and it has been specified for new ones on order.



Increase Roving Bobbin Capacity up to 37%

WITH *NEW* SACO-LOWELL

12" x 7" EXTRA RUGGED FLYERS

AND

IMPROVED JUMBO CONE ASSEMBLY

Obtain

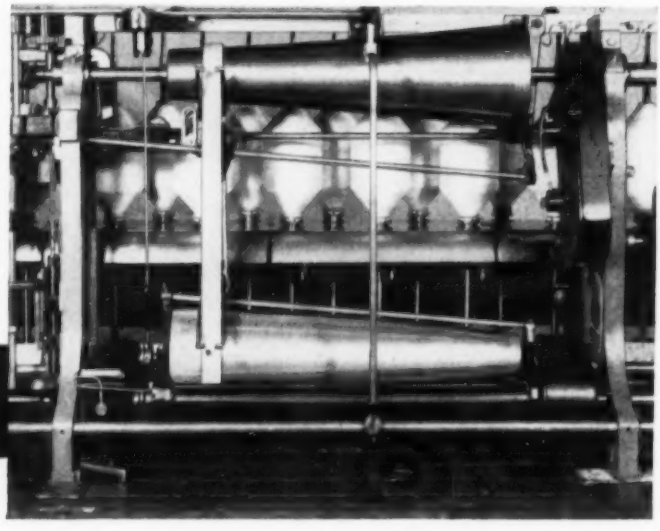
- √ Higher Efficiency
- √ Less Creeling in Spinning Room
- √ Less Re-Workable Waste
- √ Less Piecing

It all adds up to Increased Productivity per man hour!

The new Flyer is strong enough to make a 12" x 7" package on standard 12" x 6" roving frames without decreasing speed or changing other standard parts. It will run without distortion at speeds up to 735 rpm. In many cases, this new flyer permits the building of a bobbin holding 60 to 62 ounces of roving, which amounts to a 37% increase in bobbin capacity. The cost of equipping standard roving frames with these new 12" x 7" flyers is so reasonable that they pay for themselves in a comparatively short period of time.

Jumbo Cone

The need for additional power to drive long, large package roving frames has been solved by Saco-Lowell engineers increasing cone speed 33% and cone size 50%. The new Jumbo Cone assembly provides a driving element with sufficient power capacity to drive these frames at a very high percentage of efficiency. The new aluminum bottom cone which is also included in the assembly reduces belt slippage to a minimum.



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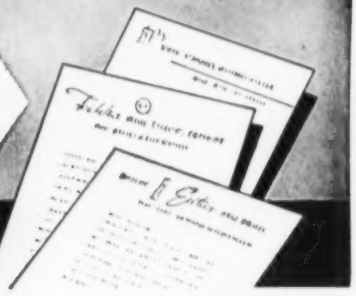


Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editors "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

Use this tow cutter in making rug yarns—a reply

THE EDITORS:

We have read the question submitted by Contributor No. 8972 in the September 1957 issue, and we believe we can offer him some useful information concerning the choice of cutters to be used on the Pacific Converter when making rug yarns.

It is recommended that the three 3½" and 4" cutters only be used with the single and double variable cut attachment on the Pacific Converter.

The 6" cutter is not recommended for use with the variable cut attachment because of the distance between the first and second and the second and third positive nip rolls. This distance is about 6¾".

A few fibers longer than this length, such as would be obtained using a 4½" variable cut, will flip through these rolls without difficulty. If a 6" variable cut were used, however, a high percentage of these fibers would be about 6¾" and this could interfere with the operation of both the shuffle section and the drafting elements of the Converter.

There is a possibility that a 6" cutter could be used if the amount and the rate of oscillation of the variable cut attachment were reduced to a point that would permit the cutting of only a few fibers above 6¾" in length. In order to prevent breaking the longer fibers, the pressure of the second positive nip roll should be reduced to a minimum to allow slippage through this set of rolls.

Various staple diagrams can be obtained by the use of the variable cut attachment. (Pages 11 and 12 of the Warner & Swasey Pacific Converter Operator's Manual illustrate the various ways of setting up this unit.) The staple diagram may be changed by regulating the rate and amount of oscillation.

The percentages of long and short fibers can be changed slightly by controlling the direction of rotation of the variable cut drive box crank. This crank is located below the center point of the connecting pin on the variable

Win $100 REACH FOR THAT IDEA NOW! **Win $100**

Kink Contest Closes December 15, 1957.

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance, and the $100 award will be made to the winner as soon as all entries are judged.

The contest rules are simple:

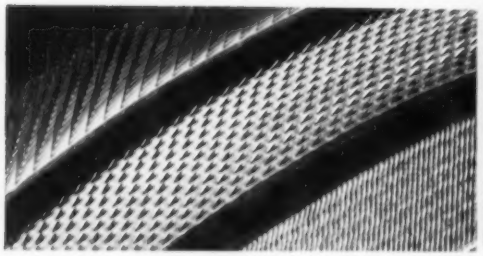
► All contributions must be postmarked not later than midnight, December 15, 1957.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously and must not be submitted to any other publication.

Send your contest entry to: The Editors, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 8, Georgia.



CARDER'S CORNER by Ashworth

CARDERS!! The purpose of this page is to serve as an open forum each month. If you have problems which you would like to throw open for discussion or if you have further comments on problems already presented, write to CARDER'S CORNER, care of Textile Industries, 806 Peachtree Street, N. E., Atlanta 8, Georgia.

Volume I, Number 10

QUESTION

How do you prevent hooked wire on cotton cards?

ANSWER

Hooked wire, either on cotton cards or woolen and worsted cards, is caused by one of two things, or both — worn or glazed emery on the grinder and too heavy grinding.

Before grinding, your grinder should be thoroughly inspected and all worn emery replaced.

When grinding, grind lightly and frequently, rather than heavily and at long intervals. The correct setting for a grinder is accomplished mainly by ear. The correct grinding with sharp emery will give forth a distinct "hiss", and only an occasional spark, if any. Heavy grinding not only causes hooks, but also fatigues the wire so that it will eventually break out.

New card clothing, after proper application, requires only a light grinding for a short time, in order to obtain a true and even surface.

On a woolen card it is also important to light-grind the fancy at regular intervals. Otherwise the points become needle sharp and produce poor work.

For further information on grinding, write for Ashworth Tip No. 8 — "Personal Tips for Card Grinders", Ashworth Tip No. 9 — "Tips on Grinding Woolen and Worsted Cards" and Ashworth Tip No. 20 — "Tips on Maintenance of Card Grinding Equipment".

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cut mechanism or shog plate.

This means that the traverse in one direction takes a greater amount of time than the traverse in the opposite direction. Depending upon the direction and speed, there will be either a greater percentage of long or a greater percentage of short fibers.

It is stated that following the Converter, there is one operation of pin drafting followed by a gill box and another pin drafting. We feel that the gill box is not necessary and recommend the following setup. The first setup would be: first operation of pin drafting an M-3650 single delivery Pin Drafter utilizing 12 heavy duty pins per inch, followed by a second operation of M-3650 dual delivery Pin Drafters with 12 or 15 heavy duty pins per inch. The third operation, an M-3680 quad delivery Pin Drafter with 15 to 18 heavy duty pins per inch.

CONTRIBUTOR NO. 9042

How much roll pressure?

THE EDITORS:

What is the optimum pressure on slasher squeeze rolls when running 30s cotton yarn?

CONTRIBUTOR NO. 9050

(If you can help this contributor with his slashing problem, send your reply to us. We will pay promptly upon acceptance.—The Editors.)

Make work tables roll

THE EDITORS:

In those industries where work tables are used for the folding or placing of garments, much time can be saved by installing casters on the table legs. The tables can then be rolled from place to place while loaded. Casters of the locking type should be used if there is difficulty experienced in keeping the tables stationary.

CONTRIBUTOR NO. 8968

"Plush covered" top clearers

THE EDITORS:

I am sending you a kink about top clearer covers. In almost all cotton mills today the two top clearers are covered with wool flannel. This is a good cover, but it does not meet every condition found in spinning.

We have some 1938 frames equipped with three lines of rubber top rolls. These rolls are oiled weekly; and the top rolls usually show a light film of oil which traps enough lint to form a paper-like covering over the rolls. The top clearers do not remove this lint, and finally it not only looks dirty, but it is picked up in the yarn in the form of spun-in waste.

We tried a few rolls covered with plush—the kind we use on our underclearers—and we noticed that a few hours after the clearers were installed the oily waste disappeared from the top rolls. Since the covers save much in cleaning and bad work, we plan to continue installing them.

CONTRIBUTOR NO. 9040
(Canada)

Fountain pen as oiler

THE EDITORS:

In such places as the office, the knitting room, and other places about the plant where there are small machines to be oiled with "minute" quantities of light oil, it is often difficult to find an oiler which will dispense a single drop. Usually if one tries to place a single drop on a surface, he gets two or three and ends up wiping off the excess—or getting mean looks for not doing it.

We have found that an old fountain pen—a new one if you wish—can be filled with light oil just as it is filled with ink, and the nib used to place a single drop of oil on the hard-to-reach places.

CONTRIBUTOR NO. 9039

Lease jute end-and-end

THE EDITORS:

Many carpet people may have our trouble in wet-beaming fibrous jute for stuffer warps. These warps are run two or three ends together through the lease, as they lift together in that grouping in the loom. Our problem was to prevent "roping" during the first 25 to 30 yards on the beam, and save that amount of waste warp being cut out by the weaver.

By "roping" is meant the slight twisting of small clusters of ends together due to the fibrous nature of the jute helped on by drafts in the drying chamber. As these tiny clusters reach the beam they cause different diameters to build up, and eventually result in tight and slack ends, a serious weaving headache.

Although this kink increased our slashing time by nearly 40%, we found it paid to run the ends in single lease (end and end) and now we have no trouble in getting a perfect lay of warp at the bottom of the beam. This eliminates waste of weaver's time and material.

CONTRIBUTOR NO. 9005
(England)

Fleece pad blots oil

THE EDITORS:

An oil cup kept about the knitting room stays dirty and oil-covered most of the time because everyone uses it but no one seems to feel responsible for its cleanliness. We find that a piece of fleece-lined cloth used as a pad on which to store the oil cup when it is not in use keeps the excess oil blotted up. The pad is changed as often as it fails to blot up the oil.

CONTRIBUTOR NO. 9015

There's No Substitute For Experience

An "old pro" is respected in any field of endeavor. Know-how is an acquired asset—not a production-line product.

Not all Keever sales-service men are old in years, but each has the technical training so necessary to understand your plant operations. And the combined contact experience of the group is more than 120 years.

For your benefit, general and specific mill problems are discussed in staff meetings which often include engineers and specialists from our laboratory and plant.

The success secret of Keever quality products is based on service.

Charles C. Switzer, Vice President
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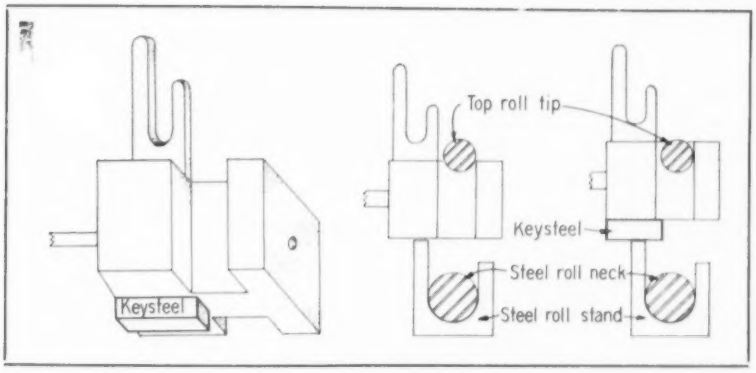
Look Behind

VICTOR Mill Starch

A KEESTAR PRODUCT

the weaver's friend

Roller blocks adapted to larger spinning rolls



THE EDITORS:

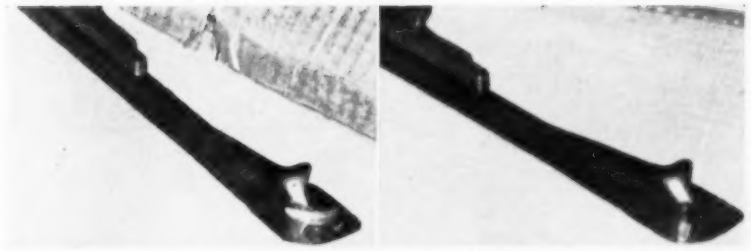
If they are not worn, the same top roller blocks can be used when the top roll cot diameter is increased. This is accomplished by welding or brazing a piece of keysteel to the bottom of the block as in the view to the left in the illustration. This will be only necessary on the two end blocks over the front roll on each section of the steel roll.

This will raise the blocks so that the tip of the top roll will not run on the top edge of the block as it does in the center sketch, but will run nearer the center.

The size of the keysteel and the length will be determined by the increase in cot diameter and the setting of the top roll. The keysteel should be placed on the block in a position where there will be some allowance for adjusting the top roll without the keysteel dropping behind the steel roll stand or onto the neck of the steel roll.

CONTRIBUTOR No. 9044

Repair bruised binders without welding



The binder to the left shows damage done by the shuttle spur. The one to the right has been repaired with the metal dust and plastic compound.

THE EDITORS:

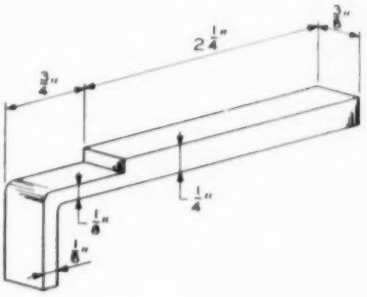
There is a commercial kit available which contains a compound consisting of 80% metal dust and 20% plastic. I tried it on my shuttle binders where they had become scored from the shuttle tips, and find that I can smooth up binders for a few cents each. I consider that it costs me a dollar to fire up my acetylene torch, so I have stopped using it for building up with metal the scored spots on my binders.

It is easy to apply. My binder man cleans off the binders, fills up the holes and allows the compound to harden for four hours before applying the leather.

An additional use I have adopted for the compound is to fill the holes in my check strap brackets where the adjusting screw head wears a depression in the spring bracket.

CONTRIBUTOR No. 8897

Three-way card gauge



THE EDITORS:

A simple but very practical three-in-one gauge for setting Whitin card screens can be made from a piece of ¼" x ¾" keysteel.

The full-size section 2¼" long (see illustration) is used for setting the screen the proper distance from the bottom of the back knife plate. The ¼" section is used to set the front screen to cylinder, gauging at the first rib from the front of the screen. The ⅛" section is used for setting the licker-in screen to the licker-in.

CONTRIBUTOR No. 9045

Mr. Weaver: How do you make metallic yarns lie flat in the fabric? Write us your answer.

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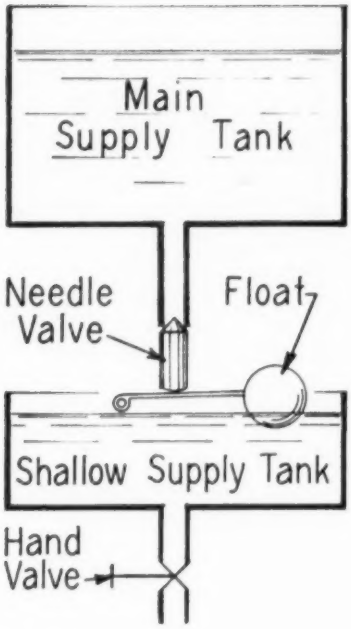
Simple liquid flow control



THE EDITORS:

This kink is designed especially for use on padders, aftertreatment boxes, etc., where liquors are piped directly from main supply tanks. As the liquid level in the supply tank drops, the manual control valve must be constantly adjusted to keep the liquid flow at the proper volume.

By placing a shallow constant head tank between the supply tank and the padders, and installing a float valve in the shallow tank, the liquid flow can be controlled automatically.

CONTRIBUTOR NO. 9034

Hammer helps tighten bolts

THE EDITORS:

The practice of striking bolt heads with a hammer to assist in tightening the nuts further is not necessarily limited to machines (framework, etc.). We find that the practice pays off when applied to electrical connections as well.

Whenever a high-voltage electrical connection is subjected to vibrations, the fittings often loosen. We prevent this by striking the back of the tightened connections with a hammer and then retightening the nuts. We repeat this a couple of times.

CONTRIBUTOR NO. 9023

Soak cots loose

THE EDITORS:

All our middle top rolls are covered with leather, so when they are sent to the roller shop to be re-covered the leather must be removed. We used a knife in removing the old covering. Naturally the knife point, in being passed through the leather and against the steel roll, dulled very quickly.

We solved the problem by placing all such rolls in a large pan of hot water. The roller coverer stays busy on other duties during the time required for the leather to soak properly.

When the leather is softened to the proper point the roller coverer lifts out the hot rolls. Most of the leather needs only to be picked off. We don't have to wipe the rolls dry — the heat within the rolls dries them.

CONTRIBUTOR NO. 9008
(Canada)

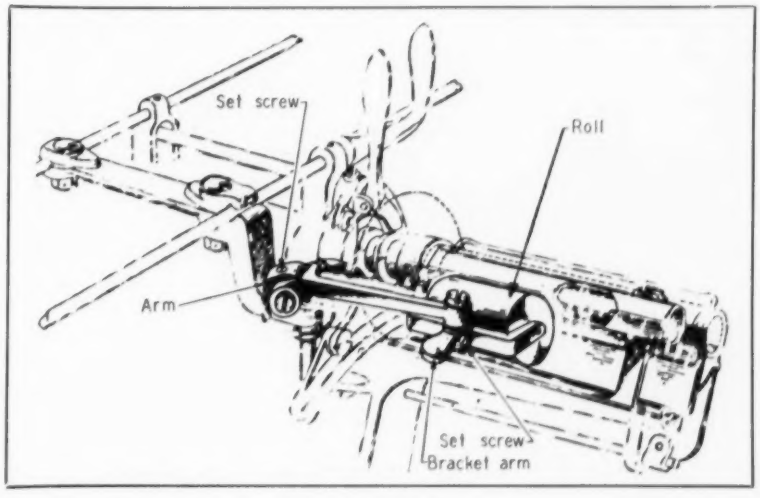
Prevents occasional bad yarn package

THE EDITORS:

The arm and bracket arm (see illustration) of the No. 50 Bobbin Spool Attachment sometimes work loose and require tightening. Each time one of the members comes loose, a bad package is likely to result. I solved that problem for us by inserting set screws at the points indicated on the drawing.

The set screws must be mounted to engage the threaded portion of the screws they are to hold. To prevent thread damage to that portion of the screw, a copper slug may be inserted under the set screw to rest against the threads of the screw to be held.

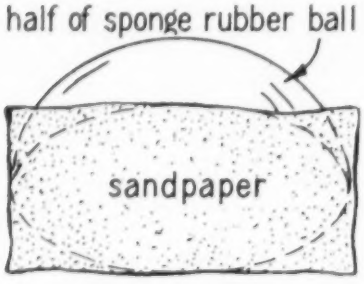
CONTRIBUTOR NO. 9049



Sandpaper support

THE EDITORS:

There are many instances in the knitting room where sand paper is used for smoothing objects such as end sticks, shafts, etc. Sandpapering with the paper without a



firm backing can be very slow and tiring work.

We have found that a piece of sponge rubber (obtained by slicing a sponge rubber ball in half) will reduce the fatigue and speed up the process. The paper may be held on the rubber by folding the edges of the paper up and over the flat surface of the ball, or it can be glued onto the flat surface with any good flexible cement.

CONTRIBUTOR No. 8994

3-in-1 screw driver

THE EDITORS:

Our knitting machines contain many large screws (such as those which hold the sections on the cylinder) which must be tightened with considerable force. Then when they have to be removed for a repair job they seem to be stuck. There are times when the screwdriver must be struck with a hammer to loosen the screw.

We eliminated most such troubles by making a "T" screwdriver from a flat piece of steel so we would have the torque advantage offered by a long handle, and to permit the screwdriver to be inserted in areas of low "head" room.

The screwdriver shown in the illustration is not dimensioned be-

cause each fixer usually prefers to work out the combination to meet his own tastes.

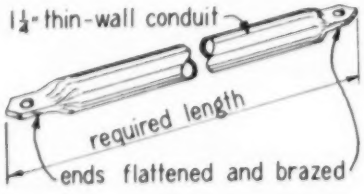
CONTRIBUTOR No. 9047

Lease rods from conduit

THE EDITORS:

A short time ago we had need of some lease rods 105" long. To have had them made of wood would have been costly, and the rods would not have been too practical even then.

We took two pieces of conduit (thin wall pipe) and cut them to



length. Then we hammered the ends closed (flat) and brazed the raw edges around the ends. After polishing the bronze bead we were ready to install the rods. Total time for the two: 30 minutes.

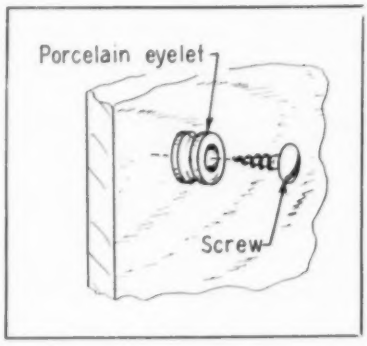
CONTRIBUTOR No. 9046
(Canada)

Eyelets make door pulls

THE EDITORS:

In our knitting shop the cabinet doors were made with different kinds of pulls—some were nails, some were screws. Some doors had no pulls at all. We made pulls for all the doors of eyelets from Tompkins knitting machines.

We used screws, in some cases stove bolts, to secure the eyelets



to the doors, and the result is a good-looking set of useful door pulls.

CONTRIBUTOR No. 9032

Soap knitting belts

THE EDITORS:

Once a week I hold a bar of saddle soap against my knitting machine belts for a short time while the machines are running. The treatment prevents the belts from cracking, and permits them to remain flexible. We find that the belts pull better and last longer than untreated ones.

CONTRIBUTOR No. 9016

Beats chalk

THE EDITORS:

Chalk is a good substance to use in marking work while truing it in the lathe. It will leave a trace on almost all work except highly polished surfaces such as pulleys, ground shafting, and material that has become worn to a glaze.

I have found that red wax crayon works very well on these highly polished materials. It leaves a good trace on the high spots and is easily removed with a piece of cloth.

CONTRIBUTOR No. 8967

Golly! I made a rainbow!

Yes, Johnny, you made a rainbow. For yourself and for your time and for your place, you made *your* rainbow.

You discovered a funny, three-sided piece of glass held by grubby little fingers and placed in a stream of sunlight would break a warm shaft of light into many, many colors.

Almost three hundred years ago a very wonderful man named Newton told his friends he, also, could make a rainbow. He told about *his* rainbow in a certain way, a scientific way, and out of the telling grew a wonderful accuracy.

Here, Johnny, is where we fit in.

These are some of the results of our work: The fine sharpness, crispy finish and drape of Mom's favorite print dress, the one with a hem that stays the same distance from the floor . . . Dad's suit that welcomes a morning rough-house with you and still looks fresh at the end of the day . . . your windbreaker Mom drops in the washer and then drips dry.

It's important that not one, or even ten, but thousands of dresses and suits be the favorites of Moms and Dads everywhere. And only through spectrum accuracy in Wica's origination of resins and auxiliaries used in scouring, wetting, penetrating, dyeing and finishing can manufacturers constantly improve the quality of goods and decrease the cost. We are proud of the part, Johnny, that we play in your life.

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SCOURLON is an alkaline, buffered powdered detergent with safe, high-capacity powers to remove soil, waxes and oils from nylon.

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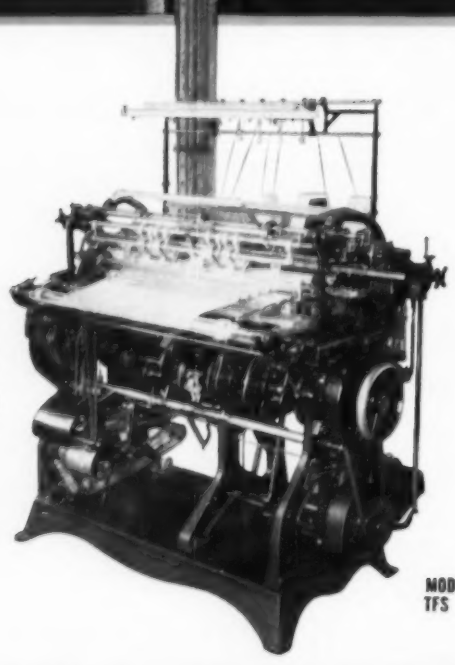
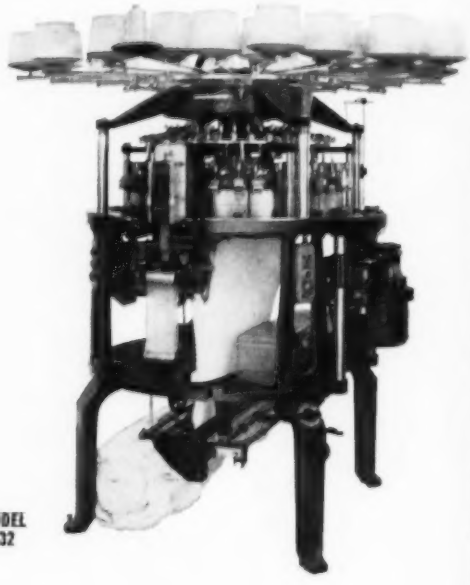
The model "AI" 32" diameter 32 feed "single purpose" circular interlock machine (rib type) produces a larger, more serviceable piece of true interlock fabric.

For knitting versatility... production and quality — specify WILDMAN JACQUARD knitting machinery



MODEL TFS



MODEL AI-32

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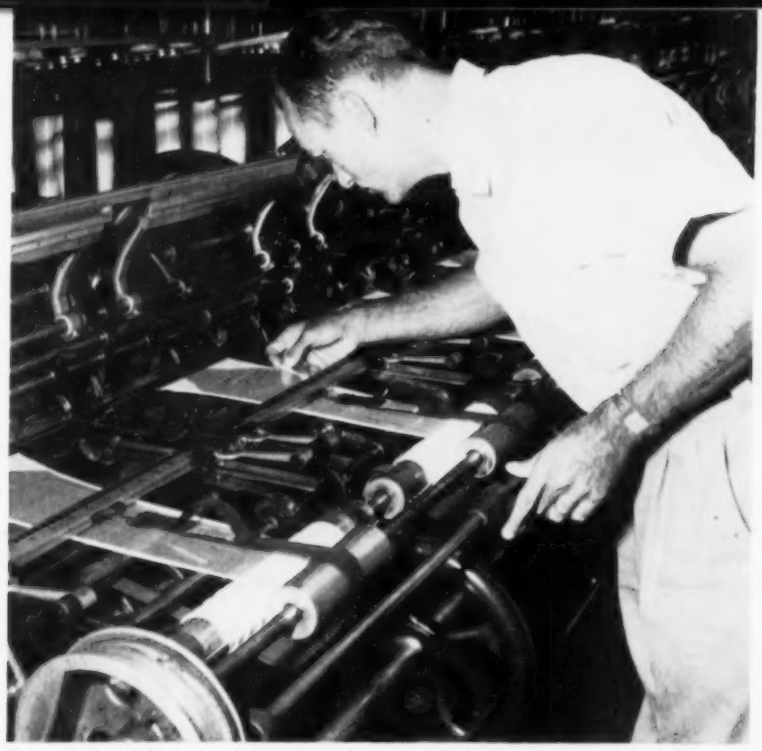


First step in quality control program is knitting and checking test set. All stockings are checked during knitting operation.

production tests assure quality

98.5% of production is first quality at C. W. Anderson Hosiery Co.

Second check of control is after seaming. Stockings out of tolerance are recorded for further action.

Staff prepared

Exclusive

C. W. ANDERSON Hosiery Co., Clinton, S. C., has built its reputation on quality goods and reliable service to customers. Deliveries are made on time as promised, and the goods are properly labeled according to quality level.

Goods are classified as first quality, irregulars, seconds, or thirds. Third quality includes salvageable goods with torn welt or foot. Damaged areas on these stockings are seamed. All goods are marked with a transfer according to correct quality level, so they must be sold accordingly, thereby eliminating the possibility of upgrading. The quality-level marks have proved dependable from the customer viewpoint.

A QUALITY CONTROL program has been in operation since the mill's inception but an improved program was put into effect about two years ago. This program includes running a test set of 30 stockings on 51-, 60-, and 66-gauge machines. The test set is seamed and then pulled on leg forms to establish the length of each stocking. Any short or long stockings are recorded, and needed adjustments are made in the knitting department.

The test set is then taken to the finishing department, where it is preboarded. After preboarding, the goods are moved to the pairing department where another check is made on length while looking for any defects in knitting or otherwise. In this check, the examiner looks for correct over-all length, length of splicing, welt, and defects (the same check is made after finishing to see what changes occurred during or after dyeing).

This record is sent back to the knitting department where it is carefully examined to see where lengths are falling according to size. For example, size 9½ is supposed to be 31½" - 32½" in length after preboarding. After finishing, 31" - 32" is length of this size.

All stockings out of tolerance are reported so the superintendent can see that adjustments are made to correct and bring all stockings in tolerance. The knitting room makes a test set every day. The test set is run all the way through to the finishing department once each week.

A reconditioning program is continuous to keep knitting machines in like-new condition.

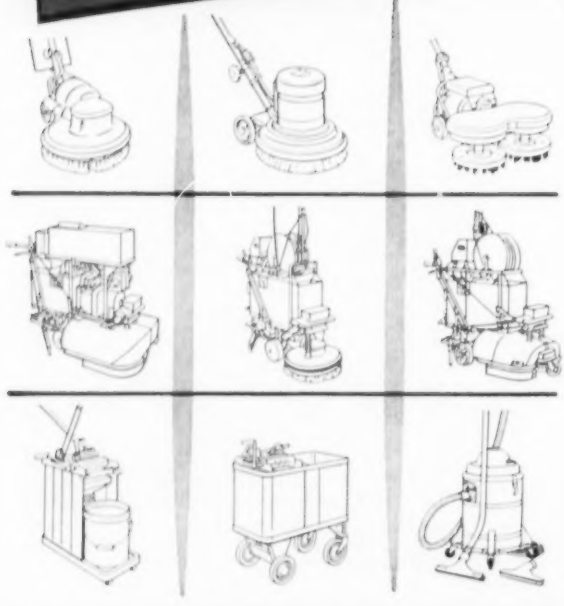
DEFECTS at knitting amount to about 1.5%, and irregulars amount to another 0.5%. On an over-all basis after finishing, 1.5% fall out-

Keep your floor-maintenance men happy . . .

with *Job-Fitted* EQUIPMENT!

Choose from the COMPLETE *Finnell* Line

More than a score of models and sizes permits selection of the equipment that's exactly right for your job!



However much a maintenance man may want to do a good job, and at the same time show savings in labor costs, he's *stymied* if the machine is too small, or too large, or is otherwise unsuited to the job. Different floors and areas call for different care and equipment. That's why *Finnell makes more than a score of floor-maintenance machines.* From this complete line, it is possible to choose equipment that is correct in size as well as model . . . that provides the maximum brush coverage consistent with the area and arrangement of the floors.

Finnell offers *Conventional Polishing-Scrubbing Machines* in both concentrated and divided-weight types, each in a full range of sizes . . . a *Dry-Scrubber,* with self-sharpening brushes, for cleaning grease-caked floors . . . *Combination Scrubber-Vac Machines* for small, vast, and intermediate operations, including self-powered as well as electric models . . . *Mop Trucks* . . . a *Wet and Dry Vacuum Cleaner,* in baked enamel or stainless steel, with 1½ hp By-Pass Motor. In addition, *Finnell* offers a full line of fast-acting *Cleansers* for machine-scrubbing . . . *Sealers* and *Waxes* of every requisite type . . . *Steel-Wool Pads* and other accessories – *everything for floor care!*

In keeping with the *Finnell* policy of rendering an individualized service, *Finnell maintains a nation-wide staff of floor specialists and engineers. There's a Finnell man near you* to help solve your particular floor-maintenance problems . . . to train your operators in the proper use of *Finnell Job-Fitted Equipment and Supplies* . . . and to make periodic check-ups. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1310 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

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BRANCHES IN ALL PRINCIPAL CITIES

side first quality goods; seconds amount to about 0.25%; thirds amount to 0.01%. Some of the goods sent from the knitting room are reclassified to a lower grade. Finishing department menders amount to about 5%.

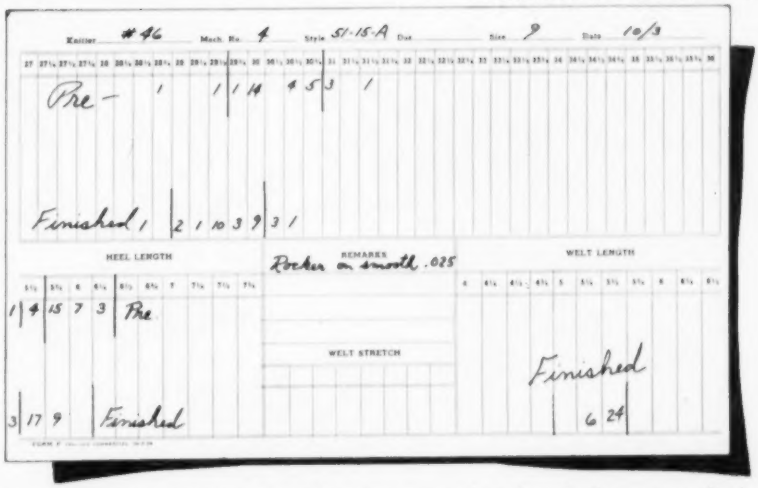
The procedure for checking normal production is thorough and effective. Pairers and inspectors examine stockings carefully on a soft white table top. However, the first check is in the knitting department while the stockings are being knitted on the machines. After seaming an inspector grades the stockings. The next checks are at pairing after preboarding, dyeing, and boarding, respectively.

Irregulars, seconds, and thirds are put up in half-dozen capacity boxes. Off-grade goods are allowed to accumulate to about 25-30 dozen pairs. Then a special run is made to apply a transfer showing the quality level before packing and putting them away.

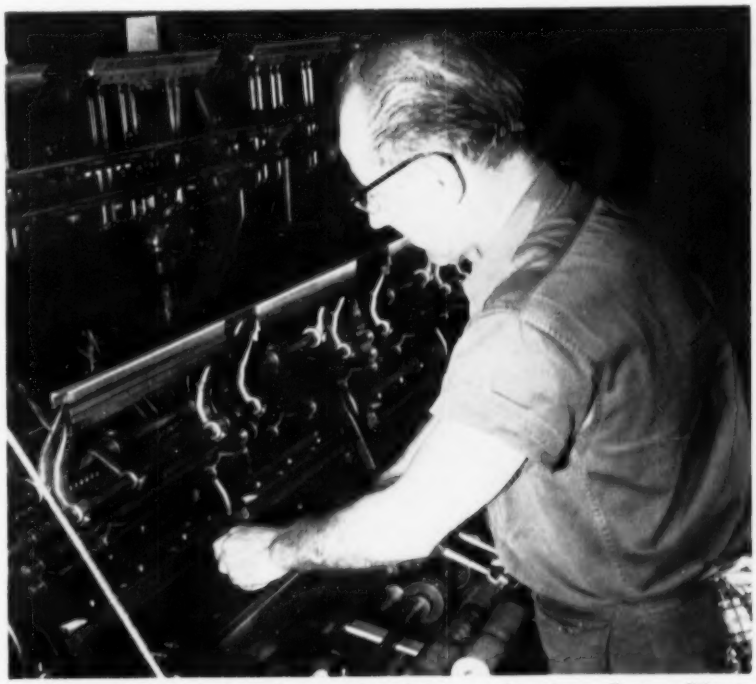
THIS MILL maintains its own sales force to do all selling, and satisfaction among customers is evident in that many customers still buy after having been with the mill since it started. Also, the total number of customers is increasing each week.

The "secret" lies in the fact that the sales force merely compares the stockings on the counter with others and the differences in quality are visible to the layman, according to reports from the salesmen.

Dapperettes, Sundae, Fawn, Col And, Sumner Notables, LaTedo, Sumner, Peeps, and Cherrie are some of the brands under which Anderson hosiery is sold. The firm has been manufacturing stockings since 1946.

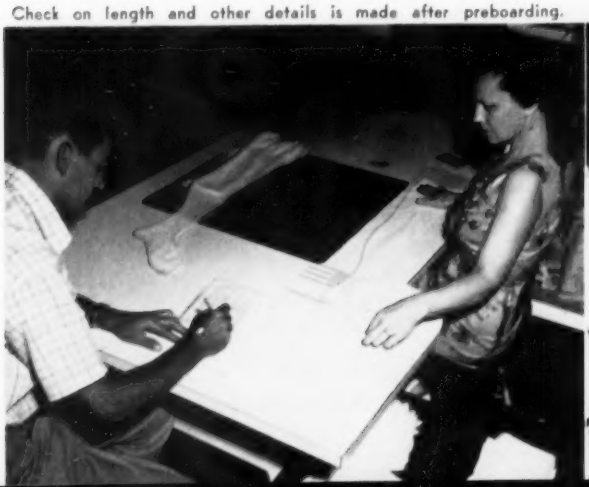


Record forms show breakdown of stockings from one machine through all operations. Stockings outside of bracket marks must be brought within control tolerances.



A reconditioning program is continuous to keep knitting machines in excellent condition to make best work possible.

Check on length and other details is made after preboarding.



Check after dyeing is also recorded for appropriate action.

Length Control *

ANNOUNCEMENT

99.75% of the entire finished production of several thousand Scott & Williams KN machines did not vary beyond one-half inch from the predetermined length — and most of them — within a quarter of an inch.

The application of the new S&W ISD Length Control attachment to your Scott & Williams KN machines equipped with S&W Automatic Tensioning Devices will enable you to knit the finest, sheerest nylon hose to just the length you plan in all your length proportions.

The S&W ISD Length Control attachment is actuated by the same compressed air supply used by the Automatic Tensioning Device and is readily built into machines — before shipment or already in place in your mill.

SAVES FIXERS' TIME

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Introductory orders are now being accepted for the ISD Length Control Attachment for early delivery.

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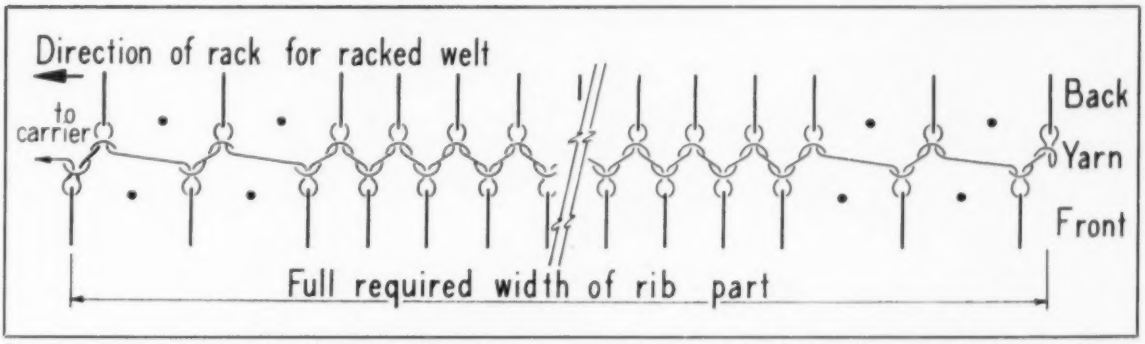


To reduce yarn acceleration, and possible breakage from that cause, four needles have been removed at the right and left of the rib part. With only 50% of the needles working in this area, the yarn is pulled more slowly into the full working speed.

How to avoid yarn breakage, holes, and press-offs on flatbed knitting machines

When knitting a slack course

by Peter Fleischhacker

Exclusive

RIBS, cuffs, and collars frequently require a slack or loose course to facilitate running-on. When knitting a loose course, the stitch cams lower the needles more than during normal knitting, stretching and straining the yarn close to the breaking point.

Only recently have knitting machine builders incorporated a two-speed motor drive to be able to run the machine at slow speed during knitting of the loose course. But flatbed machines more than one or two years old very seldom have this feature, and one has to find other ways to minimize waste and downtime. As the aim is to keep up production, reduction of machine speed throughout the rib length must be ruled out right away. But if the following points are observed good results will be obtained:

1. Good, uniform, soft yarn packages are a must. A hard cone will feed already-stretched yarn to the needles.

2. Minimize yarn friction wherever possible. The fewer eyelets and guides the yarn has to pass through, the less friction and stretch is applied to the yarn. Always find the shortest and straightest way from cone to tension device, from tension device to yarn carrier.

3. Depending on the yarn, clean once or twice a day. First remove most of the dust and lint accumulated and use the airhose. Be sure to clean all eyelets, guides, carriers, latchopener-brushes and needles (latches and butts). Use a brush to apply special needle oil before resuming knitting. Not more than five to ten minutes should be needed for this kind of cleaning, and if two press-offs can be avoided due to a clean machine, the downtime will have been gained plus all the benefits of a clean machine.

4. Do not knit with damaged needles—all needles and their latches must be moving easily. Be sure the two needle-beds are well centered to each other.

5. Avoid unsymmetric take-off. Too much pull will strain the yarn. There should be still some lengthwise elasticity left in the knitted piece.

6. And finally the best cure of all: put the needles into working position as in the illustration. This will avoid cutting at the selvages.

The reason is very simple: When you start pushing a car, you have to push (or pull) hard, because you have to overcome the car's inertia. The moment the car starts rolling and has gained momentum, you need less pushing or pulling to keep it rolling. Exactly the same happens to the yarn.

At the beginning of a new course, the very first needle will start pulling the thread. But before the thread starts slipping through the tension and the additional friction spots along its path to the very first needle, the yarn will be stretched. If the machine is to make a loose course, the already stretched yarn cannot give any more and might break within the first two or three needles.

In the illustration it can be seen that at the very right and left of the rib part, four needles have been put out of action in such way that for a short distance only 50% of the needles are working. The benefit of this is that the yarn gets pulled more slowly in the beginning (for the first five stitches only) before attaining full running speed. In other words, acceleration takes place.

But there is an added advantage from this needle set up. The very first stitches are standing a little bit more apart (looser) and are much easier to control during the running-on operation. In the finished garment it does not show, to my experience.

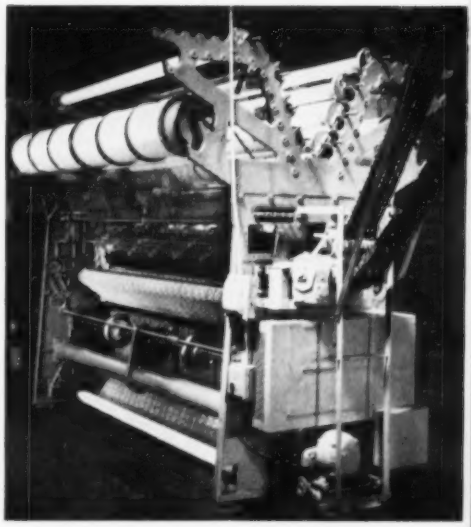
You can see why the NEW KIDDE KNITTER is revolutionizing the lace industry

Look at that lace. It's elaborate, intricate and fine – *much* closer to imported lace than any other made on knitting machines. Ten guide bars on the Kidde Raschel Knitter have made these incredibly beautiful designs possible – and have revolutionized the whole lace industry. The ten guide bars even give you liners to outline the gimp. And consider the speed! – up to 300 courses per minute. It will run with anything from 2 to 10 guide bars and it'll make virtually anything you want from tulle to elastic fabrics. No wonder it's already the most widely used Raschel type machine in the world.

If you specialize in any one of the following fabrics: elastic fabrics, tulle, and various types of net, lace and lace edgings, shoe cloth, laundry nets, sport shirtings or underwear fabric, or if you need versatility encompassing many of these types, the Kidde Raschel Type Knitter can give you faster, more economical, more dependable production.

SEND FOR FABRIC SAMPLES

We will gladly send you swatches of fabric and complete information on the range, speed and quality of production possible on the Kidde Knitter. Write today for details to Department KLG1.



The new Kidde 10-bar Raschel Knitter

Kidde

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS • BEAMERS
CREELS • SLASHERS • WINDER-REDRAWS • TENSOMETERS • TENSION COMPENSATORS

MANUFACTURING CO., INC. – 42 FARRAND STREET – BLOOMFIELD, NEW JERSEY

SOUTHERN OFFICE – 267 W. MAIN ST., GASTONIA, N. C.

The word KIDDE is the trademark of Walter Kidde & Company, Inc., and its affiliated companies.

For users of Banner SCP knitting machines, here is a

New method of color changing

by Winston Shewmake
Exclusive

A NEW method of color changing provides additional versatility, accuracy, and increases the pattern scope immensely on Banner solid color machines.

An amazing feature of this new method is that the conversion can be made from the existing color changing parts which are already on the machine, with the addition of only two small screws.

Another improvement is that some of the existing parts which are required for the standard color change mechanism can actually be discarded. This will still leave enough parts for a much improved color changing mechanism. Having fewer working parts, the machine is less likely to have parts failure.

Still another feature of this new method is that of increased color pattern scope. Three color combinations may be run from the same side, alternate colors may be run independent of the opposite side, and either side can be changed at any time regardless of the action of the opposite side. Also, splice and non-splice courses may be knitted in group or alternate groups as may be desired by the pattern designer.

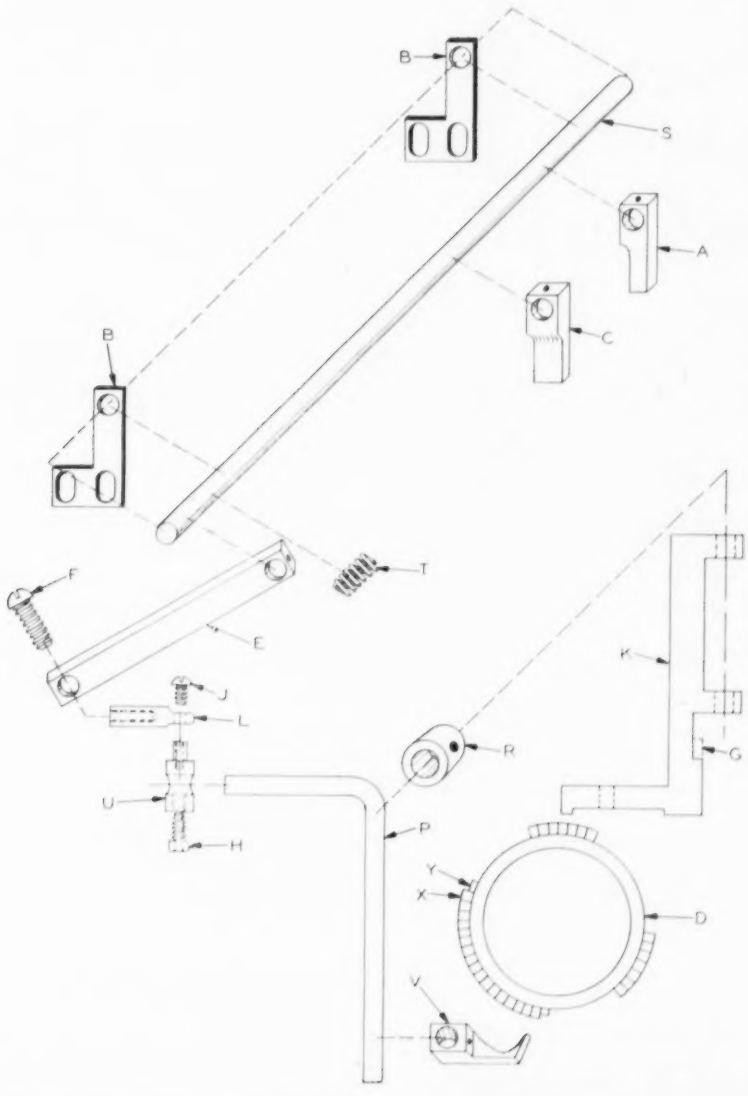
The fact that the color change is directly actuated by and from the pattern drum assures the color changes to be in time with the actuating pattern drum. This makes it utterly impossible for the color changes to be out of time with the actuating pattern drum disc. Therefore, color change sequences are always synchronized with the pattern.

Complete conversion to the new method of color changing can be accomplished in less than forty minutes.

To convert to the new method of color changing, which consists of a slide rather than a rotating principle, remove:

1. Lever stop operating lever connection.
2. Stud, which lever stop operating lever connection passes through.
3. Tension spring.
4. Compression spring.
5. Collar, on lever stop operating lever connection.
6. Link, at end of lever stop operating lever connection.
7. Right rear, lever stop operating lever.
8. Stud holder.
9. All yarn lever selectors.
10. Yarn lever selector shaft.

(Continued on page 174)



This feature of the Reading "100" automatically arrests carriers for making idle courses; provides extra carrier stops for knitting interlocks at end of welt and start of splicing; permits knitting of single loop fabric 2-needles in from selvedges of loopless toe tab. It's the Automatic Stop Block feature of . . .

the machine that almost thinks for itself

The mill-proved Reading "100" is just about the nearest thing to a completely automatic machine as is possible in full-fashioned knitting. Every motion is automatic — and closely controlled — to assure continuous, uninterrupted production of superior-quality stockings at lower per dozen costs, and to make it possible for an operator to earn more money. Let us give you the mill-proved Reading "100" story.

Builders of:
The "Reading" CK-A
Circular Knitting Machine
The "Reading" Tricot Machine
The "Reading 100"
Full Fashioned Knitting Machine
The "Reading" Full-Fashioned
Outerwear Machine
The "Reading" Braiding Machine
Textile Spring-Beard Needles
Arrow Latch Needles

The "READING 100"
Full-Fashioned Knitting Machine

Knitting Machine Division
TEXTILE MACHINE WORKS, READING, PENNA.
Reconditioning Plant at Asheboro, N. C.
Builders of Textile Machinery Since 1900

the man of many talents
your ***FRANKLIN PROCESS*** *representative*

Testing Color Fastness on Fade-o-meter in Franklin Process Laboratory

Want the Best Color for the Purpose?

If so, consult with your Franklin Process representative — from any one of our 5 plants or from our New York office. This representative is "a man of many talents" because he is specially trained not only to supply you with quality colored yarns, but also to advise you on:

1. **The best type of dye for the purpose**
2. **The best type of yarn for the purpose**
3. **Fashion trends in colors**
4. **The best method of rewinding from Franklin Packages**
5. **The best yarn putup for the purpose**
6. **The best yarn conditioning for the purpose**
7. **Proper finishing procedures for specific colors**
8. **The proper way to handle dye lots in the mill**

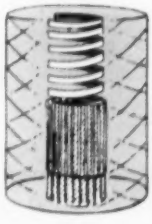
Frequently he can give you such information on the spot. But if not, he can call on the most completely equipped and best staffed laboratory in the business for prompt, dependable answers.

When you need colored yarns (cotton, worsted, or spun synthetics), let "the man of many talents" supply them; let him help you to get maximum value and efficiency with them. It costs you no more.

Franklin Process

Yarn Merchants and Largest Package Dyers in the World — Dyeing Exclusively on the Franklin Spring

Providence • Philadelphia • Greenville • Chattanooga
Fingerville, S. C.
New York Office — 280 Madison Avenue



X-ray view of Franklin Package — the "secret" of uniform shades. Don't say "package dyed". Say "Franklin Process Dyed".

(Continued from page 171)

11. Control drum lever bracket.
12. Control drum lever.
13. Front and rear selector shaft latch levers.
14. Control drum lever extension.

Discard the lever stop operating lever connection, tension spring, collar, stud holder, and latch levers.

Reassemble and adjust as follows (refer to sketch on page 171):

1. Grind away section (G) of the control lever bracket (K).
2. Shape the control lever extension (V) as shown in the illustration.
3. Put approximately a 15 degree bend on the control drum lever (P).
4. Place collar (R) onto the control drum lever (P).
5. Slide control drum lever (P) through holes in control drum lever bracket (K).
6. Attach by means of the provided Allen setscrew the control drum lever extension (V) to the control drum lever (P).
7. Place stud (U) onto lever (P) and secure lightly with a 10/32 hex head screw.
8. Fit link (L) over stud (U) and secure with 6/36 screw (J).
9. Secure screw (F) into lever (E) and on into link (L).
10. Slide shaft (S) through rear bracket (B).
11. Fit onto shaft the yarn lever selectors (A & C).
12. Place compression spring (T) over shaft.
13. Fit lever (E) onto shaft (S) and secure with provided Allen setscrew.

This completes the assembly, and now color changing is done by breaking off lugs from the top pattern disc, at the desired section of the pattern as illustrated by the drawing at (D).

High lugs will position the yarn lever selectors to the extreme rear and will constitute one color change. Half lugs will position the selectors between the yarn fingers and cause splice courses. Lugs broken off will allow the selectors to be positioned fully forward by means of the compression spring and thereby establish another color change.

By experimenting with different height lugs on the pattern disc, by different width yarn lever selectors, and also different combinations of yarn lever selectors, the pattern designer may produce an array of different color changes not at all possible with the standard mechanism. One roll on the operating pattern drum which is required, will further increase the color change possibilities.

Some trends in knit goods tastes

by I. D. Goldman
Vice-President and Sales Manager
The Adler Co., Cincinnati

Exclusive

OUR present problem is that of producing enough socks. We can't supply all the demands store buyers place upon us—we sell very little through jobbers. And having a sales force which is actively on the store scenes, we have a firsthand account of changing consumer tastes.

From our sales position there is a marked return to the natural fibers—cotton and wool. Aside from other criteria involved in this observation, I recall an instance in which a production number of ours suddenly jumped from an annual output of 5000 dozen to 40,000 dozen pairs. This is still a growing number with us, and is basically a woolen sock.

Of particular interest to us is the way in which a sock of ours, dyed a fire-engine red, suddenly caught the fancy of a multitude of consumers.

We have long since produced sports socks of several colors—for a long time we have made knee length hunter's hosiery in which the predominant color is red, but this one sock is a short one—and in that array of hosiery we always included the fire-engine red number.

Overnight, almost, and without warning, Rich's, Inc., Atlanta, Ga., began selling that red number in quantity. It is now a popular "number" in several localities.

Fashion is a capricious thing. The present use of knee-length socks among our female friends can be explained in part by our having worked hard at keeping that style before the girls. Part of it just happened. At one time our knee-length numbers outsold all other hosiery groups we made for women.

Some of its success is an outgrowth of our standard of living. We now have a great amount of leisure which was unknown a few years ago. That leisure seems to require a casual mode of dress of which the knee-length sock is a part. The custom does not belong within the ranks of the teen-age girls only—their mothers demand them.

Perhaps if one could predict accurately changes in living standards, one could have some enlightenment as to the styles those standards will create.

Of one thing we are reasonably sure: The adoption of knee-length hosiery for casual wear by our Army and Air Forces will tailor the thinking of our men folk in the direction of using more and more knee-length hosiery in non-military wear. Remember how millions of GI's learned to sleep without pajamas? We predict the reverse where the knee-length hosiery is involved.

The Army and Air Forces adopted the new uniform only after long study and careful prepa-

ration. Perhaps the fact that the British male has long since worn the knee-length hosiery had its bearing—the British have long since regarded it as a sensible item. Whatever the cause, or causes, for the change, we are faced with a style change which we would have chuckled over had it been predicted seriously a few years ago.

Speaking of the armed forces, I am led to comment on the "new" Army and Air Forces Quartermaster Corps. During the 90 years our firm has produced hosiery, it has supplied socks for the armed forces during each war which has occurred during that period. And during the limits of my experiences, the present QM staff is the best trained, the best qualified, and the most exacting yet. Those men know what to look for in an item, whether it be socks or sacks.

Variety in production also helps us economically. We manufacture a simple tubular fabric for use in the meat packing industry for protecting smoked hams, etc. It also is used in the medical profession as a sleeve over arms and legs when they must be encased in plaster casts. The knit tube is placed against the skin. Though the fabric is a simple one, it must be made under close tolerances as to yarn weights and courses per inch.

A favorite approach to these tests by the buyers is to relax the fabric and then check the courses against the sample weight. This makes it next to impossible for a supplier to use the wrong yarn number or try to skimp on the courses per inch. The fabric is also cut to length, stuffed with cotton thread waste, and used as a filter in Diesel engines.

Advantages of a knitted "contour" diaper are enjoyed by this infant.

Our philosophy on quality is a simple one: we feel that any successes we have enjoyed in the trade are due both to our working hard at sales and in giving our customers a bit more for their money than do our competitors. We are serious about this business. We plan to stay in it.

Consequently we try our utmost to include more in the way of material and workmanship than we are expected to give. Our increased volume has offset the added costs of that policy.

We have developed a knit tubular diaper. To conform to the contours of the infant's body, we narrow the diaper width at each end and at the center to form a modified figure "8" instead of a triangle.

Owing to its absorptive powers the knit fabric proves most effective. Two of them can be pinned on to give double protection without being bulky.

The label "imported" has lost a measure of its glamour. Technological advances perhaps can be given credit for some of the reduction in emphasis. Three years ago we bought Spain's entire production of Argyle socks available within Spain's export allowance. Now we find domestic production adequate. Besides, Spain turns her export allowances on and off unpredictably.

The Spaniards made the sock by a quasi-mechanical method. They turned a special knitting machine by hand in order to get the desired effect. Now in the United States the socks are made mechanically.

What can be done to prevent steam line failures

(How two textile mill operatives were killed when an 8" strainer on a steam line ruptured was reported on pages 158-159 of the September, 1957, issue of TEXTILE INDUSTRIES. *According to Mutual Boiler and Machinery Insurance Co., adoption of the following practices should do much to lessen the possibility of steam line failures such as this.—The Editors.)*

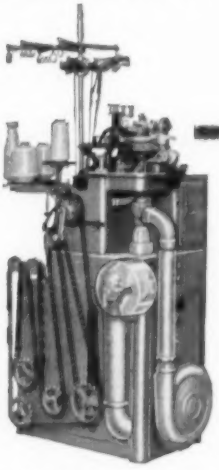
Mutual Boiler recommends that the following principles be brought to the attention of personnel responsible for placing steam lines and equipment in operation:

► All steam lines should be properly pitched and provided with adequate drains, trapped or otherwise.

► Traps are usually intended for taking care of the condensate under normal operating conditions. However, if a line has been out of service for any prolonged period, the condensate should be removed by the use of open-end, free-blow drains. These open-end drains should blow to a sewer or the end of the drain should be visible to the operator so that he can determine when all of the condensate has been removed. This also applies after experiencing operating difficulties which might cause car-

Hosiery Buyers that KNOW — Go SEAMLESS

Seamless Mills that GROW — Go FIDELITY*



* The only electronically controlled circular knitting machine that offers

- Single or double feed operation
- 400 or 474 needles
- Automatic Tension Device
- Individual Motor Drive
- PLAIN—MESH—or S-T-R-E-T-C-H at the push of a button.

Keep growing in this booming seamless market . . . investigate the advantages of the amazing Fidelity "400" and "474".

Designers and Builders of Intricate, Automatic Precision Machines

SINCE 1911

FIDELITY MACHINE COMPANY, INC.

3908-18 FRANKFORD AVENUE, PHILADELPHIA 24, PA.

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SOUTHERN REPRESENTATIVE: C. S. BRANNOCK, P.O. BOX 763, MT. AIRY, NORTH CAROLINA

ryover of water into the steam lines or following unexpected shutdowns.

► Operators placing equipment or steam lines in or out of service should be properly trained regarding the opening and closing of valves plus the importance of being certain that the lines are free of condensate or at least all of the drain valves are open and functioning properly prior to admitting any large amount of steam into the line or equipment.

► In some instances condensate drain lines are equipped with strainers ahead of the traps. For the traps to operate at maximum capacity it is essential that the strainers be kept clean. The maintenance program should include periodic checking and cleaning of these strainers.

► After a reducing valve has been out of service for a repair or to change a diaphragm, it is important that the person returning the reducing valve to service should understand thoroughly its operation. The pilot valve and any adjusting springs should be set to prevent the main valve from going to a wide-open position instantaneously because of a low pressure differential. The main valve should be allowed to open slowly until the proper pressure differential is obtained.

► All pressure reducing stations should have adequate safety valve protection to prevent any low pressure equipment from being subjected to high pressure in case the main valve should go to a wide-open position. As there is always the possibility of the main valve sticking, the recommendation also applies to reducing valves that fail safe.

► Care should be exercised in tightening bolts holding covering plates, bonnets, and other parts of cast iron fittings to avoid unequal strains and overstressing. Excessive stressing can contribute to failure if the equipment is later subjected to vibration or shock. The use of torque wrenches in tightening the bolts of cast iron fittings is suggested.

Diversify! *(from page 119)*

Over the last several years, using this revamped production setup not only has Yale maintained continuous production in the wearing apparel fabric trade—today it's the company's biggest market—but we have gained important parallel benefits in labor and cost savings as well.

Besides outproducing the multibox machinery by two to one, the highspeed, filling mix-equipped weaving machines have cut manhours on a two-shift basis from 80 down to 16. It takes only one operator per shift to handle comfortably the complete set of 10 looms.

Another advantage has been the complete elimination of our filling waste problems. This single factor has reduced weaving costs at least three and one half cents per yard.

Thus, thanks to the ability to adapt production facilities to a major change in market, we have not only increased substantially our over-all business volume, but today are producing a higher quality product at lower cost.

Heavy hand *(from page 149)*

tribute toward it. The federal bounty must of course be ultimately taken from the same pockets from which it would come if the project were financed locally, but there is a sort of soothing charm about getting money that you think somebody else has put up.

RELATIVELY few citizens realize the staggering extent to which government expenditures have become a necessary part of our economy, and many of these government expenditures represent nothing but pure waste. Even when some government activity relates to an absolutely essential matter of national defense, a little investigation generally shows that the government is spending two or three times as much as was needed to accomplish what it set out to do.

All of this spending creates vested interests all over the United States which bring political pressure to force continuation of the spending, and our present high level of so-called prosperity rests on this spending.

It has been interesting to note that during the past year or so, a great many more business men are gradually coming to realize the implications of exorbitant taxes and extravagant waste in the spending of tax money. Many of these same business men were completely taken in by the false promise of big profits on government contracts. They fell for the old seductive charm of the idea of getting "something for nothing," or something belonging to somebody else.

A few years of intimate contact with Uncle Snoopy and his insidious methods of taking the real profit out of business have awakened many of these business men to a better understanding of what is actually going on, and made them realize that what looks like a good profit can often be a heavy loss.

While many business men have been adding their voices to the cause of economic sanity, there has not been nearly enough clamor set up yet to accomplish much, and there needs to be a lot more noise made by a lot more people.

Efficiency in Package Dyeing Begins With *the Package*

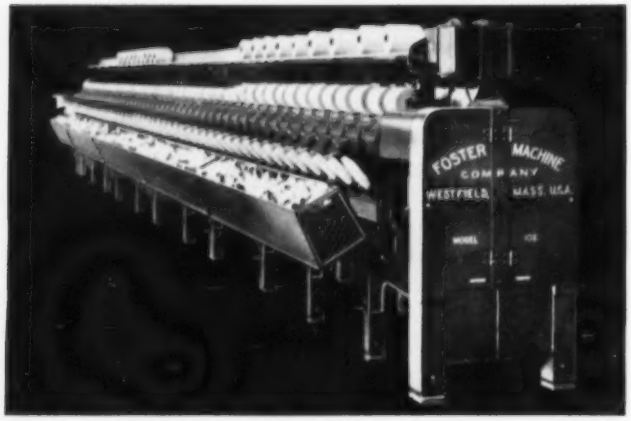
EFFICIENCY in package dyeing begins with the package. The latter must be *properly* wound and it must be *economically* wound.

Foster Model 102 Packages are ideal for package dyeing because they are of uniform density. Uniform winding speed (regardless of the diameter of the package) and accurate tension and pressure controls assure this.

Foster Model 102 machines also wind economically. They will produce twice as much as obsolete models with only ⅔ the operating cost. Self threading tension devices, empty bobbin conveyors, quick-doffing package holders and automatic stop motions are contributing factors.

The Foster Model 102 is economical to maintain as well as to operate. Repairs run as low as $3.50 per year per 100 spindle machine.

Flexibility is another feature. Angle of wind may be varied to accommodate different types of yarn simply by changing 4 small gears and the machine can be converted to wind cones or tubes at relatively small expense.



Send for Bulletin A-95A

FOSTER MACHINE COMPANY

Westfield, Massachusetts, U. S. A.

Southern Office — Johnston Bldg., Charlotte, N. C. • *Canadian Representative* — Ross Whitehead and Company Limited, 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ont. • *European Representative* — Muschamp Textile Machinery Limited, Keb Lane Bardsley, Oldham, England

FOSTER
• MODEL 102 •

For Winding Cotton, Mercerized, Wool, Worsted, Merino, Spun Silk, or Spun Rayon Yarns.

*REG. U. S. PAT. OFF.

For breath-taking color performance...

AAP DYEHOUSE AUXILIARIES

Four dependable products to simplify your dyeing and printing operations and give you consistent color quality and fastness. LEVELENE*—a retardant, dispersant and vat color stripping agent. FASTOGENE*—to improve water fastness of dyed cotton and rayon in a simple after-treatment. STABILON*—for better naphthol dyeing . . . brightens shades, minimizes crocking. DEPUMA*—superior antifoam for printing, dyeing and soaping. For working samples, write or call your A.A.P. representative at our nearest branch.

AMERICAN ANILINE PRODUCTS

A UNIT OF KOPPERS COMPANY, INC.

KOPPERS BUILDING, PITTSBURGH 19, PA. **PLANT:** LOCK HAVEN, PA.
BRANCHES: Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. • Chicago, Ill. • Charlotte, N. C. • Chattanooga, Tenn. • Columbus, Ga. • Los Angeles, Cal.
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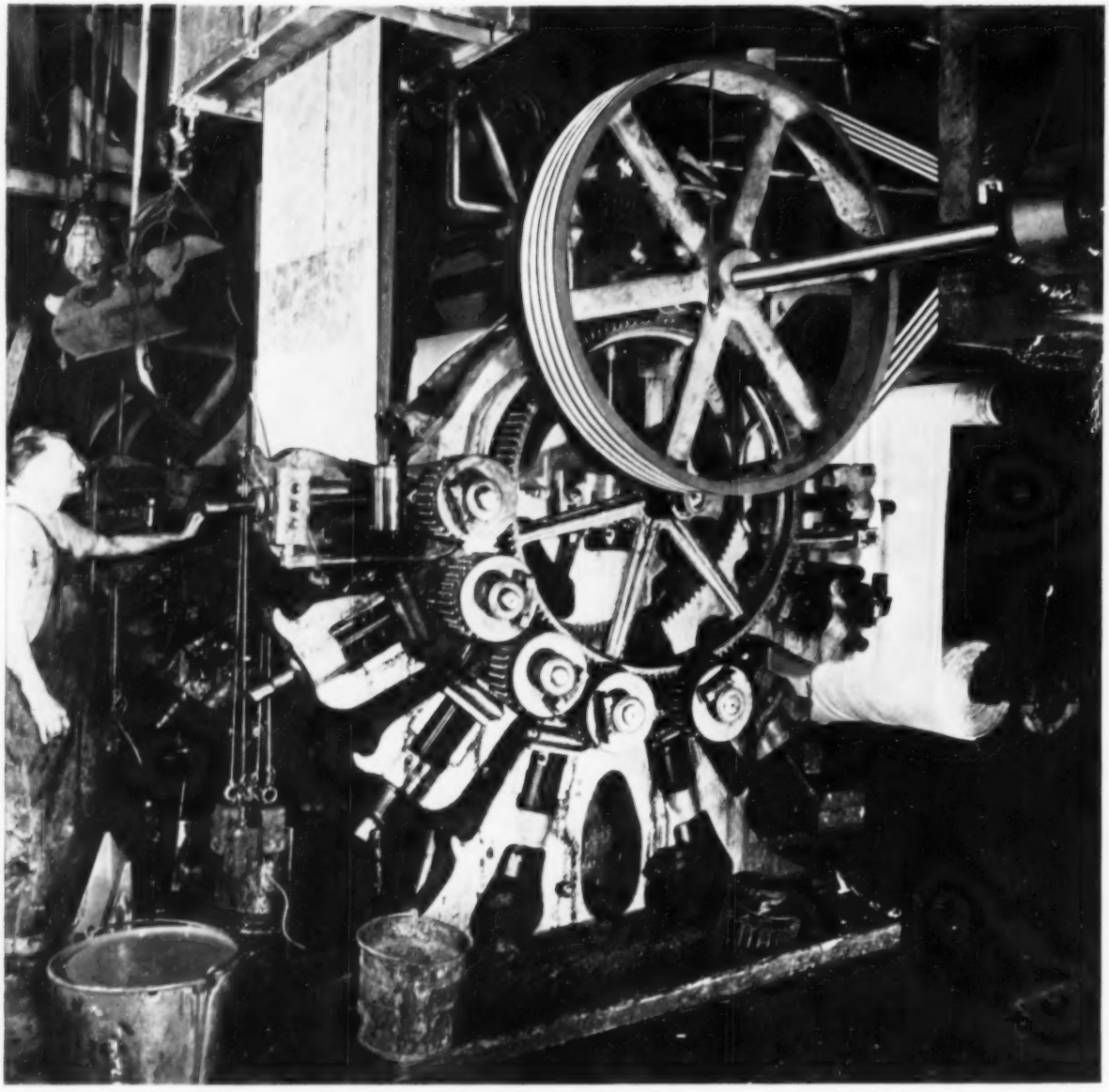


Wherever There's A Shaft That Turns . . .

Belting, chain, gearbox, direct drive . . . what method of power transmission do you need to turn the shafts in your plant?

Whatever your requirements, the best engineering in the industry is only as far away as your telephone. All you have to do is call the engineering department of SOUTHERN BELTING AND TRANSMISSION CO.

Complete power transmission is our stock-in-trade and we have a complete line of power transmission equipment. If you have a problem, let us quote . . . you'll be pleased with the attention to detail and exactness of specifications.

DON'T FORGET . . . we were formerly SOUTHERN BELTING CO., and we continue to manufacture the South's most complete line of textile loom leathers and flat belting.

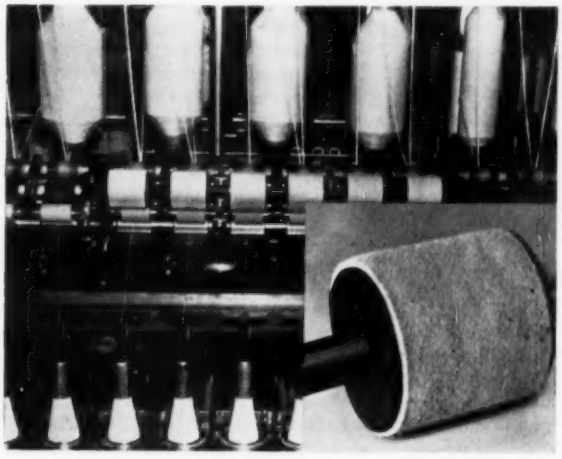
SOUTHERN BELTING AND TRANSMISSION CO.

236 FORSYTH STREET, S.W. JACKSON 2-7221 ATLANTA, GEORGIA

NEW EQUIPMENT PARADE

Machines and Equipment . . . Supplies and Services . . . Dyes and Chemicals . . . Books

Please note: Claims made in all of these announcements of new developments are of necessity based upon information furnished by the respective suppliers.—The Editors.



Top clearer covers lower cleaning cost

A revolving top clearer cover that makes it possible to substantially lengthen picking schedules with a resultant saving in labor is called Accotex NK-770. A durable expanded synthetic rubber material, it collects waste efficiently so that cots and roll stands are kept cleaner.

The waste material is collected uniformly, thus preventing uneven bunching that tends to cause end breakage and top roll laps. As a result of these features, the covers do not have to be cleaned so often. When it becomes necessary to service them, they are easily hand cleaned because the waste usually comes off in one piece.

The clearer covers do not have to be replaced as often because the material is very durable and retains its resiliency, also the covers are seamless so that there is less tendency to become loose.

Armstrong Cork Co., Liberty and Charlotte Sts., Lancaster, Pa.

Do you want more data? Write ◆ or use card on page 197; list K-101

Manager insurance

A consulting firm which serves business and industry in the fields of production planning, personnel administration, psychological testing, financial procedures, office and warehouse methods and systems, has developed a program known as "Mansurance," which is a trick word meaning manager insurance.

Based on the assumption that the present manpower shortage at the executive level will be met only by upgrading those persons already employed in a given organization, the program is designed to find out for management specifically what assets each management individual already has and what each one needs to upgrade him to the necessary level.

Assuming that there is no one course of instruction which can be prescribed to fit all the needed instruction for all management trainees or aspirants, the program fits the instruction to the case by listing the gaps existing in such areas as personality, social and mental security, management training, etc., and filling in those gaps.

Reynolds, Ward & Carey, Management Consultants, 1740 Broadway, Denver, Colo.

Do you want more data? Write ◆ or use card on page 197; list K-102

Adjust this shearer to accuracy of 0.004"

In a double head shearing machine (made by Vollenweider, Ltd., Switzerland) that brings greater speed, accuracy, and ease of control to all shearing operations, the shear cylinders remain stationary—rigidly connected to the machine frame. Adjustments for height of shearing and passage of seams are made by raising and lowering the shearing beds. As a result the high speed cylinders rotate with complete absence of distortion, vibration, or free-motion. Shearing height can be adjusted to an accuracy of 0.004".

Shearing extremely close to the seams is made possible by automatic feed slow down as seams approach the shear. After the seam passes, normal speed returns.

A second design feature is the vertical flow of the cloth through the two shears positioned one above the other. This set-up allows the operator to (without moving): (1) check and adjust shearing beds and height of shearing; (2) check the degree of cutter sharpness and make neces-

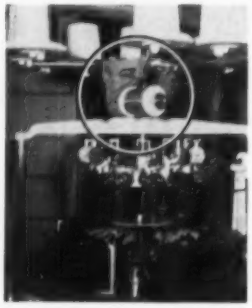
sary corrections; and (3) check the over-all quality of shearing and make easy immediate corrections.

This effectiveness prevents any occurrence of holes, stripes, unevenness, stairs, etc. Stepless adjustments permit cloth speeds from 16.5 to 195 feet per minute and shearing cylinder speeds from 500 to 1500 rpm.

Cosa Corp., 405 Lexington Ave., New York 17, N. Y.

Do you want more data? Write ◆ or use card on page 197; list K-103

Spool let-off for novelty knit yarns



The Lawson Spool Let-off is a precision device designed to maintain a uniform running tension of yarns which are difficult to draw off over the nose of the package. It also prevents starting breakage, and eliminates over-running when the feed is stopped.

The let-off has simple adjustments for tensions and braking, and is fitted with a contact which may be hooked into any electrical stop motion system employing a machine ground.

The device consists of a spool spindle mounted in shielded precision bearings having a quick release nut. The spindle is braked through an eccentric system activated by a brake arm operating through a yarn arm. When unrolling is interrupted, by a stop or a yarn break, the yarn arm drops, activating the brake and stopping the spindle. When the spindle is stopped, the tension is maintained on the yarn. When unrolling commences, the yarn arm raises again to operating position releasing the brake on the spindle.

Lawson Machine Co., 543 Mineral Springs Ave., Pawtucket, R. I.

Do you want more data? Write ◆ or use card on page 197; list K-104

Sanforlan withdrawn: Dylan issued

The trademark Sanforlan which was used to identify woolen fabrics and garments shrunk under a process sub-licensed by Cluett, Peabody & Co., Inc., has been withdrawn. In its place is Dylan, a name belonging to Stevenson (Dyers) Ltd., Ambergate, England. Permission to use the latter name is given by license and by an agreement with Stevenson for quality control.

Stevenson (U.S.A.) Ltd., 110 East Forty-Second St., New York 17, N. Y.

Do you want more data? Write ◆ or use card on page 197; list K-105

Combined bow and skew straightener

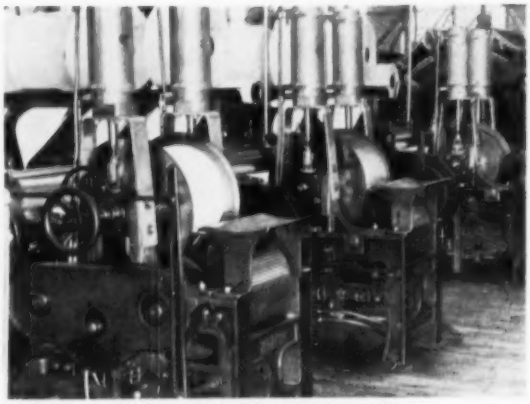
A combined bowed- and skewed-filling straightener, built by G. Durrant & Sons, Ltd., of Stockport, England, combines bow and skew straightening in one unit. The machine is constructed of heavy cast iron and steel, and has double-row ball bearings on all rollers. A twist rail

WHAT'S THE "EQ"* IN YOUR MILL?

*The "Efficiency Quotient" of combed yarn mills that have installed Long Pneumatic and Ribbon Sliver Control Systems has risen sharply. A single mill with these installations report a savings of $10,000 per year as a result.

THE (Long) PNEUMATIC SLIVER LAP-RIBBON LAP CONTROL SYSTEMS

may be installed on *existing* Whitin and other makes of Sliver Lap and Ribbon Lap machines. The system's constant air pressure on lap core insures unvarying tension and even let-off. Laps up to 38# may now be produced and the System is adjustable to permit production of laps of *any* practical size . . . with a minimum of waste at lap ends.



OTHER PROFIT MAKERS FOR TEXTILE MILLS:

- Long Pneumatic Lap Control System for Pickers.
- L&H Pneumatic Presser Roll Control Systems for Slashers.
- L&H Pneumatic Lap Pin Pushers for Pickers.

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LIVINGSTON & HAVEN, INC.

P.O. Box 808, Charleston, S.C., Phone 4-3334

Specialists in Pneumatic and Hydraulic Equipment

DISTRIBUTORS FOR WESTINGHOUSE & FULLER COMPRESSORS

is incorporated to provide tension where necessary.

The machine is sold equipped with the necessary motors, starters, and controls.

R. J. Dealy & Sons, 263 Summer St., Boston 10, Mass.

Do you want more data? Write ◆ or use card on page 197; list K-106

Self-threading backwasher

The Mark III Backwash (made by Taylor Wordsworth & Co., Leeds, England) is equally suitable for Bradford and rectilinear combed tops. The squeezing head features bowls set low down, free of obstructions, and readily accessible from both sides. The top and bottom rollers are carried on roller bearings.

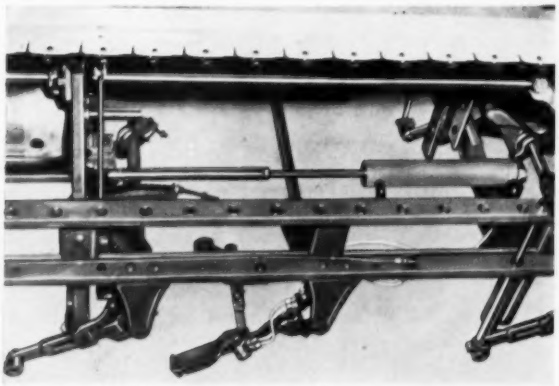
Each squeezing head is mounted on a separate base plate to permit easy addition of more units as needed. Each unit of squeezing rollers is driven by a worm reduction unit which is totally enclosed and runs in oil. Top rollers are coupled to the bottom rollers by roller chains. A hydraulic variable gear permits a wide range of speed control over the backwasher and gill boxes. The rollers are loaded hydraulically, with springs being mounted between the rams and the pressure levers to give resilience to the squeeze.

The dryer employs two perforated drying cylinders which permit air to circulate from the heated drying chamber through the sliver and into the cylinders. The dryer is self-threading, and being driven from the squeezing heads through a variable speed drive, offers easy adjustment of sliver tension. The dryer is also suited for handling and drying loose wool.

Atkinson, Haserick & Co., Inc., P. O. Box 509, Framingham, Mass.

Do you want more data? Write ◆ or use card on page 197; list K-107

Takes the work out of lowering ring rails



The pneumatic cylinder and foot pedal are shown with the connecting flexible tubing. A few additional parts are needed before the unit can be installed on older frames.

A pneumatic rail lowering device is available for easy installation on newer Whitin frames (older frames require an additional cross shaft and a small number of related parts). By removing 90% of the effort involved in lowering a rail, the system makes it possible for anyone to lower the rail with relative ease.

The mechanism is made up of an air cylinder and piston, an adjustable rack and pedal down-position lock, a lever mounted on top of the foot pedal, and a release

EVER-READY Water Supply

for fire protection and general needs

• For three generations COLE has been supplying the textile industry with tanks they could *depend* on, from the conventional elevated tank to the modern type of ground-level reservoir shown above.

In COLE tanks, the water is ready to flow, under dependable gravity pressure, at any hour of the day or night.

Take advantage of our 103 years of specialized knowledge and experience in tank construction. Send us your inquiries for tanks from 5,000 to 2,000,000 gallons—stating capacity, height to bottom and location. Write for *Tank Talks.*

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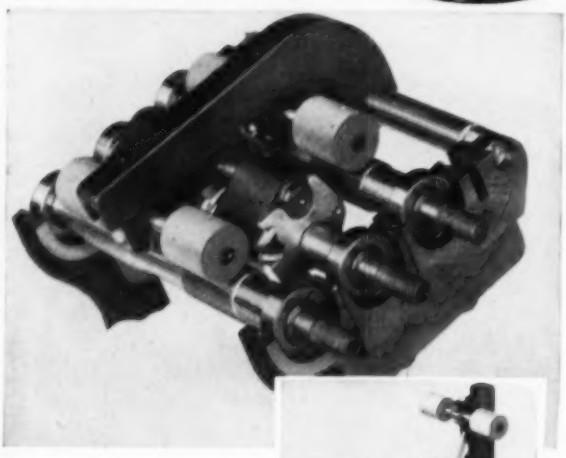
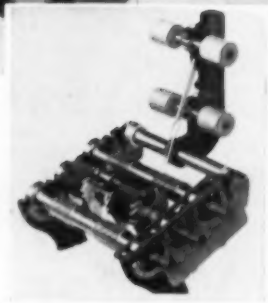
Elevated Tanks, Pressure Vessels, Chemical and Processing Equipment from Aluminum, Stainless and Carbon Steel, Monel and Other Alloys.

Established 1854

R. D. COLE MANUFACTURING CO.
NEWNAN, GEORGIA

DOES YOUR ANTI-FRICTION SPINNING HAVE THESE EXCLUSIVE FEATURES? nyaf





New, proven *nyaf*® outproduces any anti-friction spinning yet developed! Swing saddle center suspension, full anti-friction top and bottom spinning roll assembly . . . drafts of 10 to 60!

Here is anti-friction spinning operating at its very peak of efficiency—without parallel in bringing new economy, new dependability, and new ruggedness to your spinning. **And *nyaf*® can be adapted to any manufacturer's frame.**

Roller Stand 30°, 45°, or 60°. Straight line from trumpet to thread guide. Sealed ball bearing fluted rolls. Runout not to exceed .003". All diameters .0015". No more lubrication problems and worn roller necks. All head end gearing anti-friction with silent chain drive. Cylinders and idlers anti-friction.

Does your anti-friction have these *nyaf*® exclusive features? Center-suspension, with rugged center support. Induction hardened rolls, with ball bearings lubricated and double sealed for life. Positive dead weight. Front and middle rolls, with back rolls spring weighted. Front and back rolls easily dismounted for cleaning and buffing. No end play in center support. Fine adjustment of cradle to 5/1000". Cannot get out of line. One adjustment, versus 12 as on old type frame. Rugged construction takes care of effective weighting up to 120 lbs. and over if necessary, at any roll speed desired. Assembly and erecting time one-half that of conventional methods. No oil, therefore less lint. Cleanest operating assembly available anywhere. Precision-engineered for perfect roll alignment at all times with fluted drafting rolls. *Patents pending.

F. A. YOUNG MACHINE CO.
GASTONIA NORTH CAROLINA

FLUTED ROLLS FOR SPINNING • FLYER FRAMES COMBERS • DRAWING & LAP MACHINES • NYAF

lever.

Located in the head end are a reduction valve, a lubrication element, and gauge. Metal or nylon flexible tubing connect the various parts. When not in use, the mechanism is disengaged so it will not affect the usual traverse of the ring rail.

The operative places his foot on the pedal and presses down firmly to open the air valve under the pedal (the pedal locks at the bottom position). After doffing, the operative prepares the frame for starting by tripping a release lever directly above the pedal and just inside the lower side rail.

Whitin Machine Works, Whitinsville, Mass.

Do you want more data? Write ◂ or use card on page 197; list K-108

Prints tufted carpets in sharp designs

The Deep Dye Process of impregnating dyes in the form of a pattern into the pile of a carpet (tufted or woven) can be used in a pile fabric plant in lieu of dye becks. The decorations can be new and modern, or orthodox and classical, and can be made in vat, acid, or basic dyes on appropriate fibers.

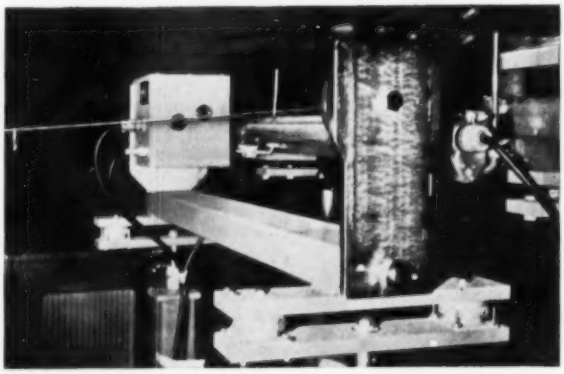
The process consists of a machine to apply the design to the pile fabric, steaming or ageing apparatus to fasten the dye stuffs, and conventional washing and drying apparatus.

The colors used are fast to light and washing, and at a cost little more than that of pre-dyed yarns.

Deep Dye Industries, Inc., 65 Dale Ave., Ossining, N. Y.

Do you want more data? Write ◂ or use card on page 197; list K-109

Scanner detects broken ends at beaming



The Automatic End Break Detector will detect a broken end of yarn in beaming operations, and stop the beamer automatically. Installation of the equipment, which consists of a highly sensitive photoelectric scanning system, eliminates the conventional drop wires used in beaming operations as well as the maintenance and cleaning necessary to keep a drop wire stop motion functioning properly.

Scuffing of yarn due to movement of the guides is also abolished, and the use of the accumulator which frequently damages yarn is minimized or eliminated. The unit causes tension to be reduced by elimination of the individual yarn guides necessary for the operation of a drop wire stop motion. Most important, the number of lost ends in beaming is drastically reduced because of instantane-

ous detection by the apparatus.

Lindly & Co., Mineola, N. Y.

Do you want more data? Write ◆ or use card on page 197; list K-110

Heat shock prevents Dacron pilling

Employing a "thermal shock" principle to control the pilling of Dacron blends (done by heatsetting the fabrics at high temperatures and short exposure times), the RHE heatsetter uses radiant heaters at temperatures of 1200 F to 1400 F applied in close proximity to both sides of the fabric. Under these conditions fabrics of various weights and constructions reach setting temperatures of 400 F to 425 F within 1 to 4 seconds.

Wired for any plant voltage, the machine may be used also for curing crease resistant resin finishes, to set synthetic fabrics, and to cure pigment color resins.

Natural fibers remain unaffected by the high temperatures. Neither is there any dye sublimation nor yellowing of finish.

The fabric width is controlled by preframing the fabric an inch or more over the finished width to allow for thermal shrinking.

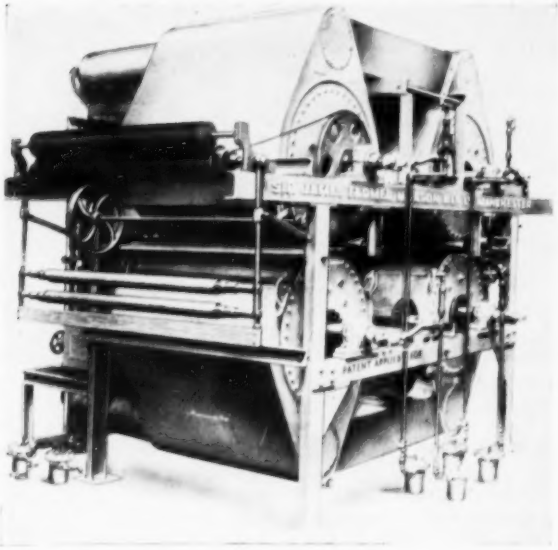
Depending on the fabrics weights, the processing speed varies. A normal speed may fall within the range from 20 to 50 ypm, with more speed being possible with the addition of heat.

Radiant Heat Enterprises, Inc., 630 Morris and Essex Turnpike, Short Hills, N. J.

Do you want more data? Write ◆ or use card on page 197; list K-111

Ups cylinder drying efficiency five times

The four-cylinder Accelerated Cylinder Drying Machine (cloth) made by Sir James Norton & Co., Ltd., Manchester, England, "is at least as efficient as a 21-cylinder drying machine of the standard type." The cylinders are heated in the usual manner by steam. Special ducting is built around the periphery of the cylinder, and through this ducting hot air is blown to the surface of the cloth during its passage over the cylinders. The cloth is thus



Bargaining for bicarb or ppt. $CaCO_3$?

(PURE AND UNIFORM, OF COURSE)

...then check with Wyandotte

Wyandotte Bicarbonate of Soda meets U.S.P. XV standards. In fact, it's the same high-quality, pure bicarb that you find on drug-store shelves, only priced at carload savings. Wyandotte Bicarb comes in several grades to meet all textile requirements . . . from buffering or scouring agent to dye-bath assistant and water softener.

Wyandotte PURECAL* (precipitated calcium carbonate) is known for its whiteness. It's ideal as a weighting and finishing agent. The unique precipitation method makes it pure and uniform, and unlike most precipitated carbonates, virtually free from iron, magnesium, alkali salts, as well as abrasive materials. Meets U.S.P. XV standards.

For complete data on Wyandotte Bicarb or PURECAL, and qualified technical assistance on how best to apply these products to your process, call our nearest branch office or write: *Section TI, Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

*Reg. U.S. Pat. Off.

Wyandotte CHEMICALS

MICHIGAN ALKALI DIVISION

dried both by contact with the cylinders and by the hot air.

The hot air serves to remove the humid layer, which in normal cylinder drying restricts the escape of moisture from the cloth. The hot air is provided by fans blowing through steam heated multitubular heaters. A recirculation system insures the minimum of steam consumption.

Among the advantages offered are: (1) less floor space required; (2) lower steam consumption (the hot air is recirculated); (3) low horsepower (the four cylinders are mounted on ball bearings); (4) high efficiency fans use little horsepower; (5) low maintenance costs (only four joints to maintain); and (6) less migration because the fabric is dried on both sides simultaneously. Each cylinder is driven through a slipping clutch.

R. J. Dealy & Sons, 263 Summer St., Boston 10, Mass.

Do you want more data? Write ◆ or use card on page 197; list K-112

Cooler running rub aprons with more "rub"

Golden Bull Dog Rub Aprons, for handling blends of wool and such synthetics as Orlon and nylon, provide increased rub due to a greatly increased "coefficient of rub." This latter property permits settings to be made more open and aprons to run cooler.

The increased flexibility of the aprons eliminates ballooning and tight center-to-center settings, which in turn insures better tracking and less wear. There is no glazing and no need for "roughing up." Washing and maintenance requirements are reduced.

Highly resistant to oil and staining, the aprons are also unaffected by normal temperature and humidity, and are available in a full range of sizes.

Boston Woven Hose & Rubber Co., P. O. Box 1071, Boston 3, Mass.

Do you want more data? Write ◆ or use card on page 197; list K-113

Handknitting machines

The Dubied Type MRF handknitting machine is recommended as a sampling machine or for the production of full-fashioned sweaters, collars, or trimmings. It is easy to reproduce on this machine European style garments and trimmings where hand operations (widening, narrowing, stitch transfer designs, etc.) are required.

The machine (as can the ones listed below) can be equipped with a power drive which includes: (1) an automatic take-down roller; (2) special electric stop motion; (3) pre-set counter; (4) adjustable course of the carriage, i.e., the possibility of knitting over any width and over any section of the needle beds.

Other types of handknitting machines include: Type MR, equipped with one kind of needle, two yarn carriers, and tubular cams (it is simply constructed); Type MRH, which is similar to MR but with high and low butt needles; Type MRF, which is like Type MR but with combined tubular cardigan cams; Type MRHF, which has high and low butt needles with combined tubular cardigan cams; Type DUX, which has high and low butt needles, universal cams, and four yarn carriers.

Dubied Machinery Co., 21-31 46th Ave., Long Island City 1, N. Y.

Do you want more data? Write ◆ or use card on page 197; list K-114

LOCKWOOD GREENE PROJECTS IN...
WOOLEN and WORSTED

Lockwood Greene has completed over 500 engagements in the woolen and worsted field, and in the entire textile industry projects valued at over three quarter billion dollars.

Ameratron Corporation, Barnwell, S. C.
Division of Textron American, Inc.
A fully air conditioned plant of 528,000 sq. ft. floor area, with new machinery on men's and women's wear woolens, its purpose to recapture the position formerly held by the American Woolen Co. when it concentrated its operations in New England.

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LOCKWOOD GREENE ARCHITECTS • ENGINEERS

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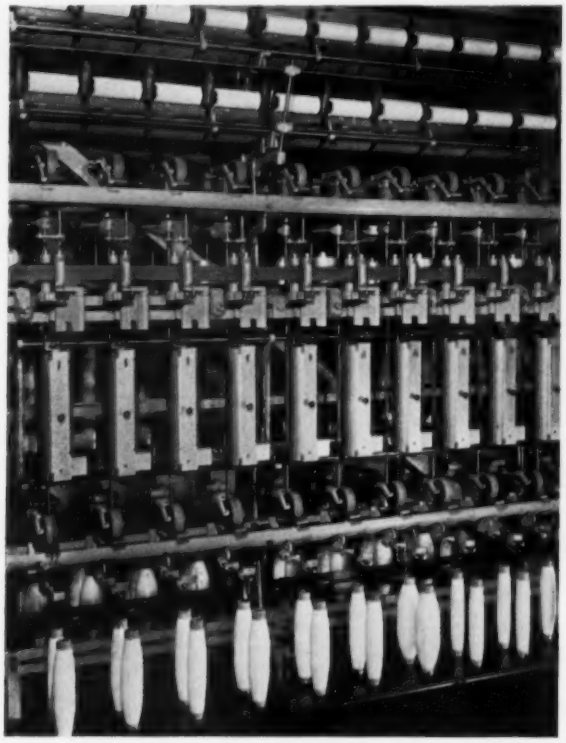
OVER A CENTURY OF INDUSTRIAL PLANT EXPERIENCE • BROCHURE AVAILABLE UPON REQUEST

Nearly doubles crimp-spin production



The English-built 240-spindle Crimp Spin 3 (CS 3) frame has 70% more production capacity than its predecessor, the CS 1. Two ends of yarn are processed at once by pulling them from separate supply packages at the foot of the machine, passing them over the feed rollers and in a parallel path through 12" heaters (these heaters are monitored by an electronic unit that registers temperature variations of plus or minus 1 C), and then through two false twist heads which are shown here inserting S and Z twist respectively.

The yarns are then taken through the take-up rollers, and finally they are collected on take-up packages either together as a twin yarn of S/Z yarn, or onto two separate packages as shown here. To produce all yarns of the same twist, the twisting unit behind the belt is moved on its eccentric mounting into a position in front of the belt, thus reversing the twist to match with the unit already in that position.

The machine is planned to run at a basic speed of 40,000 rpm with a power consumption of 7 kw.

Should a heater change temperature, a large dial at one end of the machine will detect the change in a maximum period of 15 minutes and clearly indicate the heater number.

Ernest Scragg & Sons, Ltd., Macclesfield, England.

Do you want more data? Write ◆ or use card on page 197; list K-115

Laboratory-size twister

Laboratory models (22 spindles) of the Fletcher Master Duplex Doubler-Twister (see TEXTILE INDUSTRIES for July 1957, p. 160) are available for immediate delivery.

Fletcher Works, 2nd & Glenwood Ave., Philadelphia 24, Pa.

Do you want more data? Write ◆ or use card on page 197; list K-116

EXACT WEIGHT SCALES

For fast, dependable accuracy
in quality and cost control

Model 103, one of many specialized models of Exact Weight Scales, for the textile industry.

● Exact Weight scales are meeting today's needs for fast, dependable accuracy in a wide variety of weighing operations—from raw materials to finished products. With the ultravisible indicator travel of Exact Weight, extremely close tolerance can be held to any pre-determined weight. The operator can make an accurate reading at a glance. Models are available in any desired capacity with avoirdupois or metric graduations for production operations or for checkweighing.

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- MICRONAIRE TEST
- YARN COUNT
- PRESSLEY-FRACTIONATION
- ROVING WEIGHT
- CONE AND SPOOL WEIGHT

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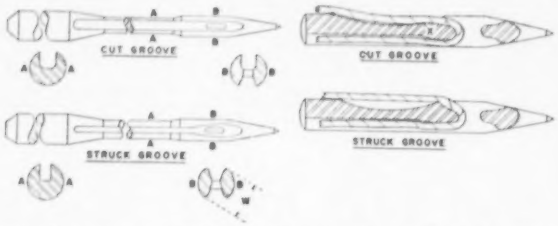
Equipment briefs

A yarn called Velon LP is a low pressure or linear polyethylene monofilament, and is especially suitable for webbing for outdoor furniture broad fabrics, casual upholstery, and automobile seat covers.

Firestone Plastics Co., Div. of Firestone Tire & Rubber Co., 307 Fifth Ave., New York 17, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-201

Sewing machine needles (called Struck Groove) featuring cold forged grooves are stronger and run cooler than needles with cut grooves. The needle shape permits it to penetrate materials with less friction and heat than a



rounded section. Cold forging permits control of metal about eye of the needle and results in greater strength.

Union Special Machine Co., 400 N. Franklin St., Chicago 10, Ill.

Do you want more data? Write supplier or use card on page 197; list K-202

Printing multicolor designs on cellophane, plastic film, or paper packages during the packaging operation is accomplished by the Imagraph machine. The unit, which does not require the use of ink or printing plates, can be attached to any standard wrapping, bundling, or bagmaking machine to enable the packager to make use of unprinted stock and apply his own custom designs.

Adolph Gottscho, Inc., Hillside 5, N. J.

Do you want more data? Write supplier or use card on page 197; list K-203

A splicing compound based on natural latex is supplied as a two-component system to preserve the adhesive qualities of the material. Vulcanol Adhesive AL-1005 produces a firm, strong, pliable joint which does not exceed the thickness of the yarn itself, and which can be drawn through the eye of tufting needles, etc., without harming the splice—shows good bonding traits on hydrophobic fibers, and drys quickly.

Alco Oil & Chemical Corp., Trenton Ave. & William St., Philadelphia 34, Pa.

Do you want more data? Write supplier or use card on page 197; list K-204

A nylon staple (420 nylon) with high tenacity and low elongation at break, described as a good "working partner" with rayon and cotton, is recommended for use in garments subjected to rough usage. Work pants containing 25% of this fiber show a wear life increase of 70% or more. Available in 2.2 denier and 1½" staple.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Do you want more data? Write supplier or use card on page 197; list K-205

A flow meter which uses no mercury, has instead a battery of sensitive diaphrams grouped to provide overrange damage protection. The type 37 diaphram meters are not affected by the temperature of the fluids being measured, and are available to withstand pressures up to 2000 psi.

The Foxboro Co., Foxboro, Mass.

Do you want more data? Write supplier or use card on page 197; list K-206

A programmer which sets the Shaftrol to a number of preset positions in predetermined order, is called the Sequentrol and is recommended for use in such areas as batch mixing, machine tool or welding positioner control, assembly operations, test equipment, etc. The instrument's dials are preset to the desired values and each dial assumes command in sequence at signal from limit or indexing switches. The positioner sets variable speed drive controls, valves, lead screws, scale poises, etc.

The Jordan Co., Inc., 3235 West Hampton Ave., Milwaukee 9, Wis.

Do you want more data? Write supplier or use card on page 197; list K-207

A surface active agent of the sulfated fatty acid ester type is particularly suited for use in processes where wetting and/or rewetting is a problem. Called Protowet XL, the compound enables dye to strike to the core of the fibers.

Proctor Chemical Co., Inc., Salisbury, N. C.

Do you want more data? Write supplier or use card on page 197; list K-208

Selective sunlighting is accomplished by Toplite, a prefabricated skylight which permits only the most desirable rays of sunlight to pass. The "control" is exercised the year around by the action of solar-selecting prisms which "open" and "close" to admit only cool, even light while rejecting the sun's rays. Installed in relation to the north-south axis of a building, the skylight permits north light to enter at all times during daylight, but blocks the entry of direct rays when the sun is high in the sky.

Kimble Glass Co., Sub. of Owens-Illinois Glass Co., Toledo 1, Ohio

Do you want more data? Write supplier or use card on page 197; list K-209

Material flow direction is changed on a conveying system by the Vertical Transfer Unit without the use of 180-degree curved conveyor sections. The unit can be operated in areas where space limitations previously prevented using a conveyor. The direction change is accomplished by a vertical lift which operates as a self-supported and automatic unit. Capacity ranges are from light to medium loads.

The Rapids-Standard Co., Inc., Grand Rapids 2, Mich.

Do you want more data? Write supplier or use card on page 197; list K-210

Portable electronic moisture meters for checking the moisture content in wood, paper, textiles, etc., operate on radio frequency power absorption principle, and are light in weight and battery powered.

A special feature permits the operator to check instrument calibration of the Model 5 Series and make 90% of the normal adjustments necessary under field conditions.

Moisture Register Co., Alhambra, Calif.

Do you want more data? Write supplier or use card on page 197; list K-211

A counter and tabber called the Tally-Tab 1000 eliminates hand counting. Recommended for any processes where counting and tabbing must be performed, it is built to re-cycle automatically when the predetermined count is reached. All operations start from "zero" position. The counter has a life of more than 100,000,000 operations.

Miller Lauffer Printing Equipment Corp., 280 Lafayette St., New York 12, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-212

The Laurel Leaf

BUSINESS MAGAZINE EDITION

Here is a truly cold water dispersible wax emulsion for winding trough work. Laurel WAX EMULSION WG, proved over the years, has been improved for easier handling. Now, if hot water is a problem in your winding room, the answer is easy: use WAX EMULSION WG—and at no sacrifice in active content! It is recommended highly for the treating of cotton, wool, Orlon, and other pure and blended spun knitting and sewing yarns. It imparts lubrication, softness and conditioning to the yarn and thereby improves running properties. It may be applied to natural, mercerized, or dyed yarns, and it is easily removed from finished garments in a regular scour. It won't turn rancid, cause odors, yellow whites, or change shades of dyed goods. And when applied to sewing threads it often eliminates the need for hot waxing or other treatments. Why not take a tip from the leaders . . . order some Laurel WAX EMULSION WG now! Samples, too, are available on request.

●

Here's good news for users of sulphonated castor oil! LAUREL TEXTILE OIL is a 50% oil produced from first quality castor oil. It is produced under rigid laboratory quality control methods, which assure product uniformity from lot to lot. It is ideal as a kier boiling assistant, a bleaching assistant, an emulsifier, a pasting agent for dyestuffs, a retarding and levelling agent in dyeing, a cloth lubricant to prevent cracking and chafing during wet processing, a finishing oil and for dozens of other applications as well. Laurel has been producing sulphonated castor oil (and other sulphonated oils, too) for over 40 years. Why not take advantage of this long experience in producing quality products when you choose processing materials? Order a trial drum of LAUREL TEXTILE OIL today. Your complete satisfaction is guaranteed.

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Laurel SOAP MANUFACTURING CO., INC.
TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

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Paterson, N. J., Chattanooga, Tenn., Charlotte, N. C., Greenville, S. C.

A 56-gallon mop truck now comes equipped with redesigned wheels which feature semi-pneumatic tires (8" x 1¾") and two sets of sealed ball bearings per wheel. The wheel discs are of welded all-steel construction—maximum load rating per wheel is 270 lbs.

Finnell System, Inc., 1300 East St., Elkhart, Ind.

Do you want more data? Write supplier or use card on page 197; list K-213

An automatic electric predetermining control device has five control knobs through which 100,000 control points are established. For use in such activities as machine and process control, and materials handling, the counter registers up to 100,000 cycles with a maximum counting speed of 600 per minute. Resetting is either automatic or manual.

Veeder-Root, Inc., Electronic Control Div., Hartford 2, Conn.

Do you want more data? Write supplier or use card on page 197; list K-214

A mercury switch that features positive pulse actuation is now available. Designated AS702B, it has applications in business machines, call systems, counting devices, inching circuits, etc. High surface tension of mercury in the switch and the double incline of the bent tube pull the mercury through the closed contact position without a chance of contact welding or dead break. The switch assures that the circuit will always be open, even if the driving mechanism fails to operate.

Micro Switch, Div. of Minneapolis-Honeywell Regulator Co., Chicago & Spring Sts., Freeport, Ill.

Do you want more data? Write supplier or use card on page 197; list K-215

A rayon tire yarn called Super-Suprenka, which offers high fatigue strength and higher tenacity (45% above yarn considered top quality a little over three years ago), is now available.

American Enka Corp., 206 Madison Ave., New York 16, N. Y.

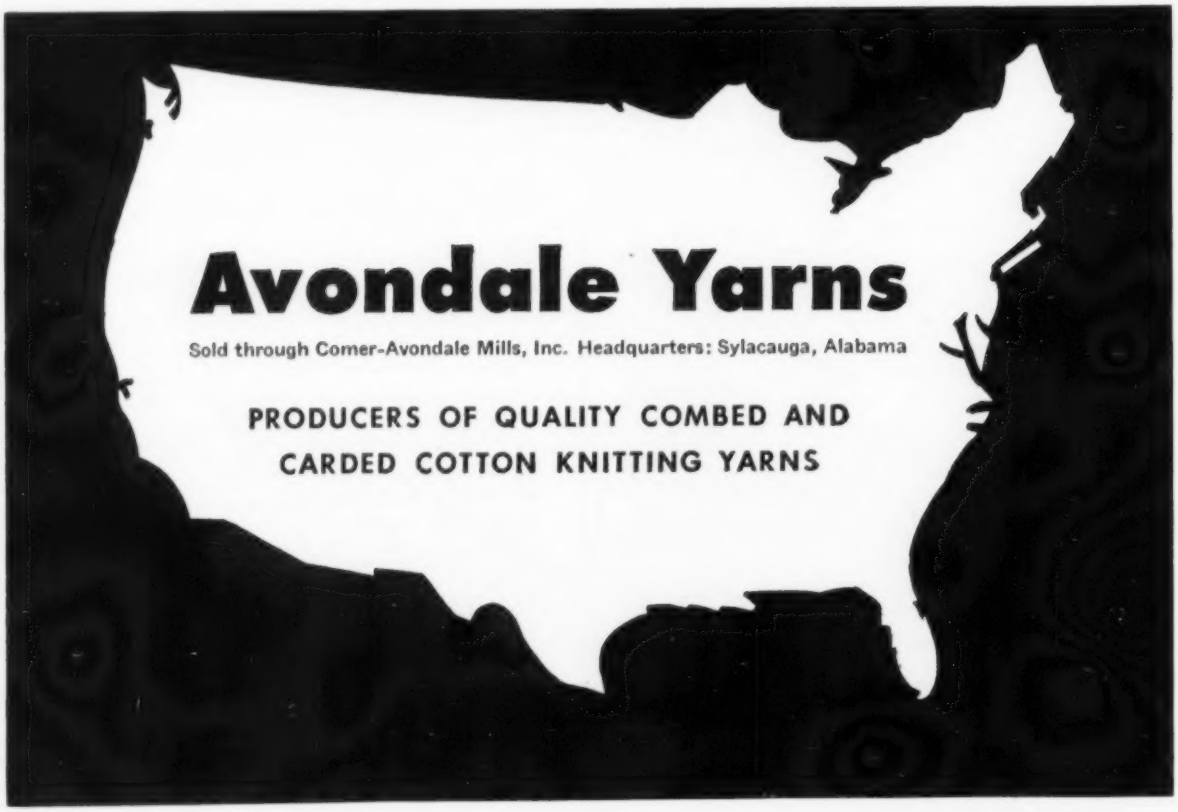
Do you want more data? Write supplier or use card on page 197; list K-216

Twelve special colors of aluminum yarn are available in both the Mylar and acetate butyrate continuous filament yarns, and foil-Mylar staple: mimosa yellow, blush pink, red red, Aztec orange, amethyst, sapphire blue, baby blue, Azore blue, emerald green, reseda green, leaf green, and ebony.

Reynolds Metals Co., 3500 South Third St., Louisville, Ky.

Do you want more data? Write supplier or use card on page 197; list K-217

Heat in thermal units and liquid flow in gallons are measured with high precision by the Pollux B.T.U. Integrating Meter. In measuring the heat absorbed by a liquid and the heat removed from a liquid, it is especially applicable for measuring the quantity of heating and cooling consumed in individual areas of all types of buildings. It is also adaptable for use with liquids encountered in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PRODUCERS OF QUALITY COMBED AND
CARDED COTTON KNITTING YARNS

many industrial and chemical processes.

Air Conditioning Equipment Corp., 219 East 44th St., New York 17, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-218

A flyer presser block which will permit a mechanic to test each flyer quickly, and to reform misshapen flyers, is available in two styles (one for drop arms), and in sizes

How the flyer presser block is used. Note vise holds it.

for all standard flyers. A wood, plastic, or babbit metal hammer is used to pound the presser against the block.

Repair Sales Division, Whitin Machine Works, Whitinsville, Mass.

Do you want more data? Write supplier or use card on page 197; list K-220

Fabric damage and yellowing caused by bleaching are halted by a wash-and-wear finish called Chlordare. Furthermore, the finish bears a guarantee against yellowing or fabric damage resulting from "hot iron" pressing. The finish shows permanent chlorine resistance, and good crease resistance and shrinkage control.

Metro-Atlantic, Inc., Centerdale, R. I.

Do you want more data? Write supplier or use card on page 197; list K-219

A process of bleaching cotton called the Activated Hydrogen Peroxide Process substantially reduces costs. Other qualities include higher brightness, brightness retention, purity, absorbency, dyeability, and reduced ash and metals content without harm to yarn or cloth. Moderately hard water can be used for washing with no reduction of absorbency. It is planned to offer the process to the industry on a royalty-free basis.

Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-221

A series of nonclog pumps, available in both horizontal and vertical models, is equipped with Single Passage Impellers which may be trimmed to fit various diameters (at factory or by user) to meet the requirements of other heads and capacities. Recommended for handling sewage, sludge, heavy settleable solids, long stringy solids, effluent and other wastes, the pumps are available in a range of sizes from 3" to 5" inclusive, suction and discharge diameters.

Aurora Pump Div., The New York Air Brake Co., 90 Loucks St., Aurora, Ill.

Do you want more data? Write supplier or use card on page 197; list K-222

A fabric finishing compound called Aston causes fabrics

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Onyx Oil & Chemical Co., Warren & Morris Sts., Jersey City 2, N. J.

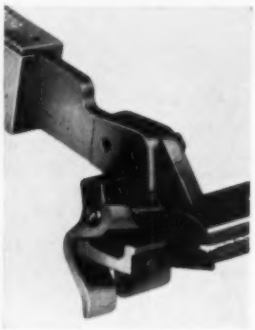
Do you want more data? Write supplier or use card on page 197; list K-223

Cellulose dyes having both brilliance and fastness are available in eight colors. The dyestuffs have in their molecules an atom that reacts chemically with the cellulose molecule, providing a strong bond. The colors: (all Cibacrons) Brilliant Yellow 3G, Yellow R, Brilliant Orange G, Scarlet 2G, Brilliant Red 3B, Rubine R, Blue 3G, and Turquoise Blue G.

Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-224

Temple has scissors-type thread cutter. The Draper #524 temple, currently available for X and X-2 model looms, features a scissors-type thread cutter mounted on a torsional rubber bearing. This thread cutter requires no lubrication and can be adjusted to cut filling ends short after transfer. Its simplified construction greatly reduces wear. The temple eliminates thread cutter spring, the conventional thread cutter, and top end.



Draper Corp., Hopedale, Mass.

Do you want more data? Write supplier or use card on page 197; list K-225

A textile moisture meter resembling an electric drill utilizes three prongs which are inserted as probes into the material under study. The moisture content is reflected in percentages on a direct-reading dial. Battery powered, the Hygros T is accurate within plus or minus 0.3%.

R. Acker, P. O. Box 124, Heidelberg, Germany

Do you want more data? Write supplier or use card on page 197; list K-226

A dischargeable blue dye for medium and navy shades on wool or silk has very good fastness to light, washing, perspiration, and water. Called Sulfonine Navy RWL Pat., the dye gives wool dyeings notable for fastness to cross-dyeing and acid milling. The shade is unaffected on prolonged boiling treatments. Offers on silk excellent fastness for a bright navy with good dischargeability.

Sandoz Chemical Works, 61-63 Van Dam St., New York 13, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-227

Ten-denier, two-filament nylon 6 yarn is available to the hosiery industry in which its use offers longer wear, better fit, greater comfort, softer and more silk-like hand, and a duller appearance than do monofilament yarns of the same denier.

American Enka Corp., 206 Madison Ave., New York 16, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-228

Hubs and split taper bushings are available for simple and economical mounting of propeller fans, impellers, gears, plate sprockets, conveyor pulleys, live rollers, gravity conveyor rolls, washer drums, dryer barrels, sheaves, couplings, clutches, and miscellaneous other

items that are to be mounted to the shaft with a positive locking clamp fit.

Browning Mfg. Co., Maysville, Ky.

Do you want more data? Write supplier or use card on page 197; list K-229

A heat-stable grease called Silicone 44 offers effective lubrication in temperatures from -40 to 400 F. Designed primarily for use in ball bearings and on plastic parts, the grease is recommended for use in such heated areas as slasher and dryer bearings. It shows little change in consistency throughout its entire operation range, and possesses excellent resistance to oxidation, moisture, and corrosive atmospheres.

Dow Corning Corp., Midland, Mich.

Do you want more data? Write supplier or use card on page 197; list K-230

A camera designed for quality control work permits the operative to photograph flat surfaces with enlargements up to 70 diameters. Using a 4" x 5" film, the Photomacrographic Camera produces a 23-diameter enlargement of a 3/16" x ¼" field. An 8" x 10" blow-up produces 70 diameter magnification.

Erdco Engineering Corp., Addison, Ill.

Do you want more data? Write supplier or use card on page 197; list K-231

Staple and tow of the acrylic fiber Verel are available in 2, 3, 5, 8, and 16 deniers. The fiber is used in pile-lined jackets, men's hose, and drapery fabric, etc.

Eastman Chemical Products, Inc., 260 Madison Ave., New York 16, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-232

A moisture content measuring instrument called the Model G-1 Moisture Detector was designed to test unopened cotton bales for moisture content. The instrument is battery operated, portable, and permits accuracy within a 0.5 to 1% range. Two 8" probes are pushed into the

bale and the reading taken directly from the instrument's dial. The probes (pins) are insulated except at the point to preclude the reading from being upset from moisture picked up outside the bale.

Delmhorst Instrument Co., Boonton, N. J.

Do you want more data? Write supplier or use card on page 197; list K-233

A bright acetate filament yarn called Type 20 is available in 75- and 150-denier sizes. Suitable for use in apparel fabrics, the filaments have a Y-shaped cross section and become crimped when immersed in hot water. The use of the yarn in a typical fabric permits a reduction in ends per inch and picks per inch because of the increased bulkiness.

E. I. du Pont de Nemours & Co., Inc., Textile Fibers Dept., Wilmington, Del.

Do you want more data? Write supplier or use card on page 197; list K-234

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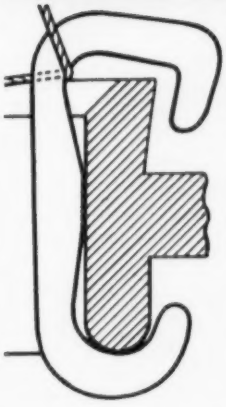

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primarily for the cold or prescour of Ban-Lon and other textured yarns. Called Ban Scour, it does an efficient job in the removal of coning oil and dirt, giving a whiter fabric with improved bulking characteristics. It may also be used in the final scouring and dyeing operations.

Richmond Oil, Soap & Chemical Co., Inc., 1041-1043 Frankford Ave., Philadelphia 25, Pa.

Do you want more data? Write supplier or use card on page 197; list K-235

An automatic calculator with a memory will automatically multiply, divide, add, and subtract in combined operations without requiring the re-entry of intermediate figures. The memory will store the answer to any calculation for use in subsequent calculations. Capacity of the Divisumma 24 is 12 columns listing and 13 columns total.

Olivetti Corp. of America, 580 Fifth Ave., New York 36, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-236

A blue dye for cotton and viscose rayon, Cuprophenyl Blue 3GL, has good fastness to light, washing, and perspiration when aftertreated with copper sulphate and acetic acid. The dye draws slowly and levels well. Hard water or presence of soda ash in the dye bath has little effect on shade or depth.

Geigy Dyestuffs, Div. of Geigy Chemical Corp., Sawmill River Parkway, Ardsley, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-237

Perfect copies of files, single sheets, book pages (without removing pages), are made in seconds with the Copease Duplex Book Copier. Designed for copy work up to 8½" by 14" size, it will pick up all print, signatures, writing from ball point pens, fountain pens, colored pencils, crayons, and spirit duplications under any lighting conditions.

Copease Corp., 425 Park Ave., New York 22, N. Y.

Do you want more data? Write supplier or use card on page 197; list K-238

A non-ionic surface active agent designed for the washing of Shetland, lambs wool, cashmere and wool blend sweaters, will readily remove oils and greases and leaves a soft, lofty hand. Called Scourpen 1611, the agent is on the acid side, and will not change the color of the yarn.

Richmond Oil, Soap & Chemical Co., Inc., 1041-1043 Frankford Ave., Philadelphia 25, Pa.

Do you want more data? Write supplier or use card on page 197; list K-239

Three-position toggle switches which have safety catches to guard against accidental toggle lever movement are available. The safety catch holds the toggle lever in a "set" position and a pull of approximately 0.109" is required to release the lever for movement.

Micro-Switch, Div. of Minneapolis-Honeywell Co., Chicago & Spring Streets, Freeport, Ill.

Do you want more data? Write supplier or use card on page 197; list K-240

Instant antifoams for chemical and industrial processing situations, are available in flake and powder form. A 25-lb bag of the compound is equivalent to ten 55-gallon drums of conventional liquid antifoam. Also the compounds are packaged in the exact weight and quantity that the user needs for making his emulsion — no scooping, weighing, drum handling, guess work, etc.

Hodag Chemical Corp., 7247 N. Central Park, Chicago 45, Ill.

Do you want more data? Write supplier or use card on page 197; list K-241

New books

Volume 10 of *The Chemical Formulary* has much useful information for the practicing chemist, beginner, and student. Containing formulas of everyday chemicals from baking powder to permanent flameproofing for cottons, it represents such widely dissociated fields as inks and weed killers, polishes and photography, and soaps and fireworks. Also it lists the chemical suppliers for the formula ingredients. Copies available from The Chemical Publishing Co., Inc., 212 Fifth Ave., New York 10, N. Y. Price: $8.00.

Book 7 of *Five Minute Safety Talks* contains 52 safety talks for the foreman — one for every week in the year. Written for use in any industry or occupation, the talks are short and to the point, and are written also for interesting listening. There is no need for time spent in lengthy research and preparation. The simplicity of each talk makes it easy to remember the key points after just a single reading and quick review. Humorous illustrations with each talk help the foreman identify the subject matter; practically tell the story at a glance. Available from the National Safety Council, 425 N. Michigan Ave., Chicago, Ill.

Written for executives, *Selection of Management Personnel*, American Management Association's two-volume handbook, is the first publication to report fully and authoritatively on these new selection techniques. Using an approach that is applicable to technical, sales, accounting, and other specialized personnel, this reference work examines the entire selection process. It defines the essential nature of the manager's job, identifies the qualities necessary for success in business and industry, and describes how managers are chosen and evaluated. Over 40 leading management experts discuss such practical aspects of executive and supervisory selection as: defining the job and its requirements, assuring an adequate number of candidates, and making the most of available tools and techniques. Specific testing, interviewing, and merit-rating methods are thoroughly explained. Available from the American Management Association, Inc., 1515 Broadway, New York 36, N. Y. Price: $15.00 (AMA members: $10.00).

In reaching back as far as the 16th century, the author of *The Story of Lace and Embroidery* traces the painstaking art of lace making, how the art developed through the ages, how it spread through European countries, and how it was handed down from generation to generation. He describes how interest in lace grew to play a part in the artistic development of the Renaissance, and how it became a mark of prosperity. As competition grew, new designs were produced which quickly became identified with the country or city of origin. The text is brought up to date with an account of the growth of machine-made laces which brought this luxury fabric within everyone's reach. The book contains a glossary of types and classifications of lace and embroidery, and many illustrations of authentic designs and types. Available from Fairchild Publications, Inc., 7 East 12 St., New York 3, N. Y. Price: $4.50

Rubber, a book treating of the fundamentals of its science and technology, covers in fewer than 500 pages, the entire rubber industry, including synthetic elastomers, latices of both natural and synthetic rubbers, and even the pertinent plastics. Copies available from The Chemical Publishing Co., Inc., 212 Fifth Ave., New York 10, N. Y. Price: $12.00.

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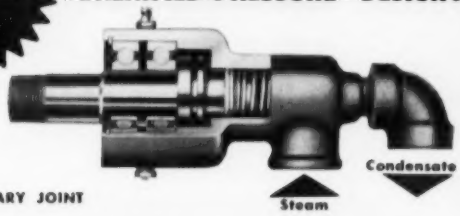

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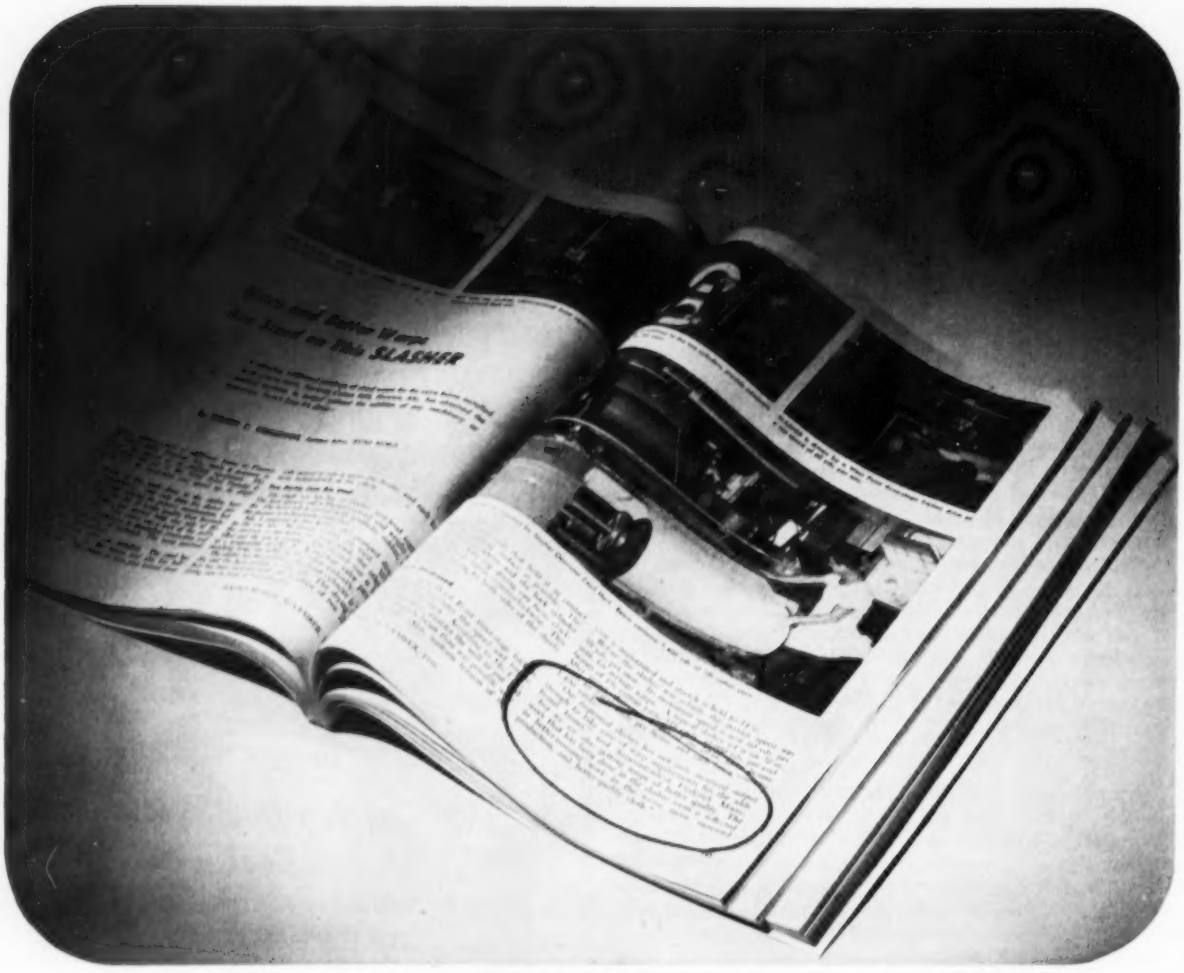

*Excerpt from statement by Supt. Frederick Moore of Florence Cotton Mills, Florence, Ala.

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9-2 TAPE STICKS ON BOTH SIDES. Bulletin tells how to save with "Scotch" Brand pressure tape. Minnesota Mining & Mfg. Co., Dept. OU-67, St. Paul 6, Minn.

9-3 MATCHED V-BELTS. Details on V-Belts that stay matched from factory to drive. Goodyear, Industrial Products Div., Akron 16, Ohio.

9-4 Lubricants for Textiles. Working samples available of Ben Boy Bearing Lubricants, Spindle Oils, Non-Melting Oils, Twister Lubricants. Write Georgia-Carolina Oil Co., Box 101, Macon, Ga.

6-9 CHEMIGUM LATEX. Details about uses for this versatile latex and other resin and rubber latices. Goodyear, Chemical Div., Akron 16, Ohio.

9-6 BASE DETERGENT ACIDS. Bulletin tells how new TENN-ACIDS offer simple and practical method for mills to prepare concentrated, low cloud point detergents based on alkyl aryl sulfonates. Tennessee Corp., Marketing Research & Development Dept., 1330 W. Peachtree St., Atlanta 9, Ga.

9-7 UNIVERSAL CARD COILER. Folder gives complete specifications. McDonough Power Equipment, Inc., Machine & Foundry Div., McDonough, Georgia.

9-8 SLASH 450 FPM. Slasher drive controls located 20 feet away, gives up to 25% more production. Bulletin 4-2311, Reliance Electric & Engineering, Dept. 208A, Cleveland 10, Ohio.

9-9 FINISHING ROLLS. "Job engineered" rolls give greater life, more satisfactory service. Write Dayton Rubber Co., Holfast Div., 1486 Lakewood Ave., Atlanta, Ga.

9-10 WOOL AND WORSTED WINDER. Six advantages of Model 102. Bulletin A-95, Foster Machine Co., Westfield, Mass.

9-11 10 SOLVAY TECHNICAL BULLETINS. Cover properties, use, storage, handling, etc., of various products. Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, New York.

9-12 METAL DETECTOR. Spot troublemakers before they harm equipment or fabrics. Radio Corp. of America., Dept. S-271, Building 15-1, Camden, N. J.

9-13 FR-S LATEX. Information on quality controlled, "pedigreed" latex. Synthetic Rubber and Latex Div., Dept. A., Firestone Tire & Rubber Co., Akron, Ohio.

9-14 DYEING OF "ORLON". "Sevron" offers outstanding lightfastness and wetfastness. Du Pont Organic Chemicals Dept., Dyes & Chemicals Div., Wilmington 98, Del.

9-15 CARD DRIVE. Details on rugged, safe, hi-speed individual drive. Bulletin 301-a, Southern States Equipment Corp., Hampton, Ga.

9-16 WRAP UP LINT PROBLEMS. Automatic lint filters remove lint from air, winds it into desposable roll. Bulletin 234, American Air Filter Co., 275 Central Ave., Louisville 8, Ky.

9-17 UREA, FORMALDEHYDE. Literature on urea, formaldehyde or U.F. concentrate-85. Dept. CUFI-29-1, Nitrogen Div., Allied Chemical and Dye Corp., 40 Rector St., New York 6, New York.

9-18 ACID MORDANT BLUE B. Details on Acid Alizarine Blue B for bright navy shades. Zinsser & Co., Inc., Hastings on Hudson 6, New York.

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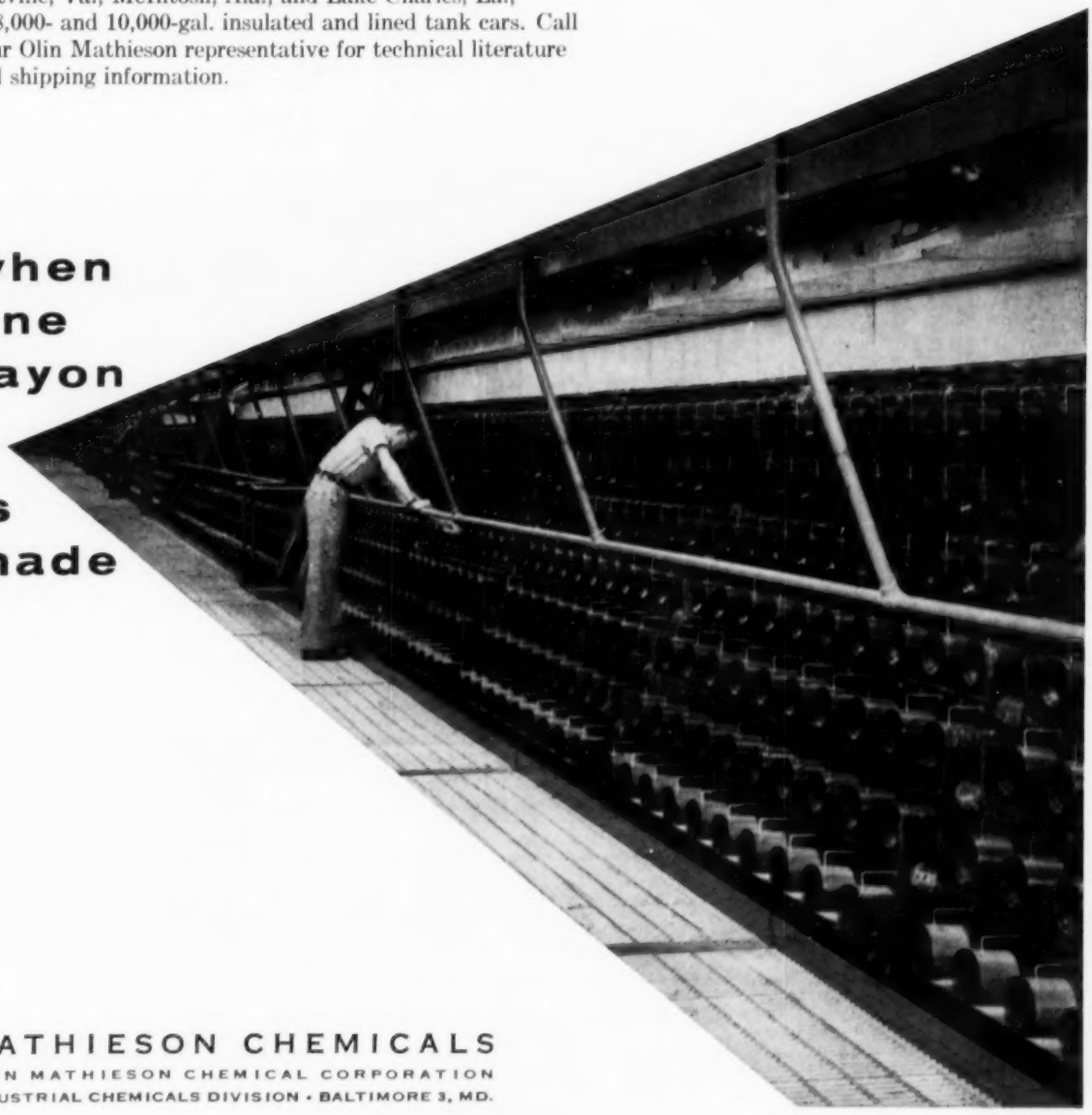

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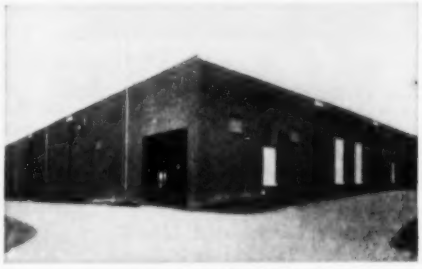

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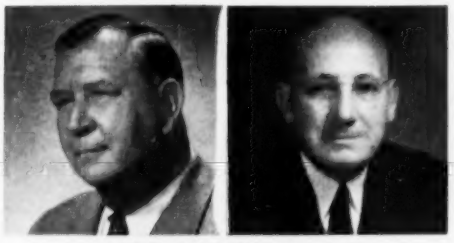

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R-424 Water Repellent Finish — Describes Aquarol water repellent finish. Arkansas Co., Inc., Newark, N. J.

R-425 Wool Oil — Describes antistatic fiber lubricant, Twitchell 7421. Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

R-426 Industrial Oil — Catalogs on Industrial Oil and Fatty Acid products. Swift & Company, Industrial Oil Dept., 1800 165th St., Hammond, Indiana.

R-427 Resins & Latices — Describes applications and gives properties. Goodyear Chemical Div., 1144 East Market St., Akron 16, Ohio.

R-428 Chemical Catalog — Lists products with chemical composition, properties and applications. Antara Chemicals Div., General Aniline & Film Corp., 435 Hudson St., New York 14, New York.

R-429 Chemical Bulletins — Issued each month as a help to wet processers. WICA Chemicals, Inc., P. O. Box 506, Charlotte, N. C.

R-430 Hydraulic Power Units — Describes unit for operating hydraulic textile machines. B. F. Perkins & Son, Inc., Holyoke, Mass.

R-431 Proctor Drying Machinery — Describes all types of dryers, includes information on preboarding. Proctor & Schwartz., Inc., 7th and Tabor Rd., Philadelphia, Pa.

R-433 Safe Handling Of Hydrogen Peroxide — Lists safety rules to be followed in handling the product. Solvay Process Division, Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.

R-435 Cut Water Treatment Costs — Describes the control of scale, slime, algae and corrosion. Oakite Products, Inc., 126C Rector St., New York 6, New York.

R-436 Rapidase For De-Sizing — The properties and characteristics of Rapidase in detail. Wallerstein Co., Inc., 180 Madison Avenue, New York 16, N. Y.

R-438 Surface-Active Agent — Properties, applications, of Nonionic Actylphenoxyethanol Triton. Rohm & Haas Co., Special Products Dept., Washington Square, Philadelphia, Pa.

R-439 Curing Oven — Details, pictures, and advantages of gas-fired oven. James Hunter Machine Co., North Adams, Mass.

R-440 Guiders And Tension Devices — Straight line guiding of open width goods. Mount Hope Machinery Co., 15 Fifth St., Taunton, Mass.

R-441 Processing Arnel Fabrics and Blends — Formulas for dyeing, printing, finishing and heat treating. Celanese Corp. of America, Textile Div., Marketing Dept., Box 1414, Charlotte, N. C.

R-442 Hycar Latices — Physical properties and typical fields of application. B. F. Goodrich Chemical Co., 324 Rose Bldg., Cleveland 15, Ohio.

R-443 Sodium Hydrosulfite — Literature and test samples are available on "T-C Hydro." Tennessee Corp., 617-629 Grant Bldg., Atlanta, Ga.

R-444 50% Or 74% Caustic — Chart helps decide most economical caustic for you. Wyandotte Chemical Corp., Dept. 565-T. Wyandotte, Mich.

R-445 New Finishing Rolls — Money-saving facts about long-wearing, quality rolls. The Dayton Rubber Co., Holfast Div., 1486 Lakewood Ave., Atlanta, Ga.

R-446 Ethanolamines — Lists application, chemical and physical properties. Nitrogen Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, New York.

R-447 Nappers For Treating Any Fabrics — Complete details on Muller Tri-Napping Machine. Franz Muller, Monchen-Gladbach, Germany.

R-448 Ball Bearing Turn Table — Describes 48-inch steel turn table for mills. Birch Brothers, Inc., 32 Kent St., Somerville, Mass.

R-449 Rotary Dyeing Machine — For use in dyeing hosiery, hats, gloves, socks, etc. Smith, Drum & Co., Allegheny Ave., at 5th St., Philadelphia 33, Pa.

R-452 Micro Switch For Wet Process — Advantages and applications in dyeing, bleaching, finishing. Micro Switch Div., Minneapolis-Honeywell Regulator Co., Freeport, Ill.

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R-456 Dyeing and Finishing Machinery — Complete line presented in series of catalogs. Birch Brothers, Inc., 32 Kent St., Somerville 43, Mass.

R-457 Dyeing, Bleaching and Drying Equipment — Complete line for cotton, wool and synthetics described. Color pictures. Morton Machine Works, 1718 3rd Ave., Columbus, Ga.

R-458 Napthol Ratios Slide Chart — Quickly and accurately enables operators to determine Napthol Ratios. Alliance Color & Chemical Co., 33 Ave. P, Newark 5, New Jersey.

R-459 "PCB" Rock Salt — Tells how product saves money, eliminates bad dyeing. Morton Salt Co., Industrial Division, 120 So. LaSalle St., Chicago 3, Ill.

R-461 Wool Oils — Describes influence of wool oils in producing quality yarns and fabrics. Procter & Gamble Dist. Co., Gwynne Bldg., Cincinnati, Ohio.

R-462 Bleaching With Peroxygen Chemicals — Bleaching methods comprehensively treated. Becco Chemical Div., Food Machinery & Chemical Corp., Station B, Buffalo 7, New York,

R-464 Automatic Control System For Continuous Bleaching — How to control temperature, pressure and liquid level. Taylor Instrument Companies, Rochester 1, New York.

R-466 Penford Finishing Gums — Complete data, including physical properties. Penick & Ford Ltd., Inc., 420 Lexington Ave., New York 17, New York.

R-467 Regeneration Of Zeolite Water Softeners — Explains advantages of Lixate Process. International Salt Co., Scranton, Pennsylvania.

R-468 Dyeing Synthetic Fibers—Detailed analysis of methods and materials. General Dyestuff Co., 435 Hudson St., New York 14, New York.

R-469 Single Apron Stock Dryers — Presents latest idea in automatic drying. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-470 Eliminate Dye-Bath Shock — How to protect fabrics from crow's-feet, uneven shades. Foxboro Company, 487 Neponset Ave., Foxboro, Mass.

R-471 Continuous Peroxide Bleaching Ranges—Illustrations, description and specification of ranges. Rodney Hunt Machine Co., 49 Mill St., Orange, Mass.

R-474 Industrial Brushes — Features use on shears, printing machines. M. W. Jenkins' Sons, Inc., 444 Pompton Ave., Cedar Grove, N. J.

R-475 Waste Heat Recovery — Describes system of waste heat recovery from polluted water. Ludell Mfg. Company, 5200 West State Street, Milwaukee, Wis.

R-476 Washers For Scouring, Bleaching, Acidifying — Describes high-capacity, continuous process washers. C. G. Sargent's Sons Corp., Graniteville, Mass.

R-478 Wool Cleaning Unit—Describes unit for cleaning carpet wools mechanically before scouring. Proctor & Schwartz, Inc., 7th St. and Tabor Rd., Philadelphia 20, Pa.

FIBERS AND YARNS

R-501 Textile Research—Story of the Research Department. American Viscose Corp., 350 Fifth Avenue, New York 1, N. Y.

(Continued Next Page)

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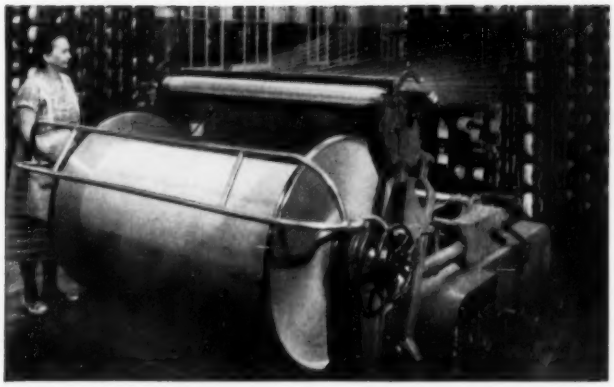

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R-502 Fortisan-36, New Textile Fiber —Includes charts, diagrams, text, presents technical properties. Textile Sales Dept., Celanese Corp. of America, P. O. Box 1414, Charlotte, N. C.

R-503 Caprolan Nylon Heavy Yarns —Describes strength, long flex life and ready dyeability. Fiber Sales Dept., National Aniline Div., 261 Madison Ave., New York 16, N. Y.

R-506 Rayon—Mile By Mile—Details on how rayon is produced mile by mile, perfect inch by inch. Industrial Rayon Corp., 500 Fifth Avenue, New York 18, N. Y.

R-507 The Chemstrand Nylon Story—Describes the birth and growth of Chemstrand nylon. Chemstrand Corp., 350 Fifth Ave., New York 1, N. Y.

RESEARCH—TESTING—LABORATORY

R-601 Testing Instruments—Descriptions of 37 instruments for testing textiles. Custom Scientific Instruments, Inc., 541 Devon St., Kearney, N. J.

R-603 Shadograph Weighing Devices —Pictures and information on various types of scales. Exact Weight Scales Co., Columbus 8, Ohio.

R-604 Evenness Tester—Details on taking the guess out of quality control. Uster Corp., 2516 Wilkinson Blvd., Charlotte, N. C.

MANAGEMENT, PROCESS ENGINEERING CONSULTANTS, FACTORS

R-701 Factoring Service—Details on advantages of factoring, including information on general banking and pension plans. Trust Company of Georgia, Atlanta, Ga.

R-702 Beechcrafts At Work — Tells how Beechcraft executive airplanes can save time and money. Southern Airways Co., Atlanta Airport, Atlanta, Ga.

R-705 The Wonalancet Way — Deals with current problems in Textiles. Wonalancet Company, 128 Burke St., Nashua, N. H.

R-706 A Fair Day's Pay And In Return A Fair Day's Work — Outlines proper utilization of labor, material and equipment. American Associated Consultants, Inc., 250 Park Ave., New York, N. Y.

GENERAL PLANT OPERATION

R-802 Belt Lacing Equipment — Includes prices, specifications, etc. Clipper Belt Lacer Co., Grand Rapids, Michigan.

R-803 Window Washing Systems — Tramrail Equipment enables men to reach all windows. Cleveland Crane & Engineering Co., Tramrail Division, Wickliffe, Ohio.

R-804 Motor Selector—How to select A-C motors for specific application. Reliance Electric and Engineering Co., 1088 Ivanhoe Rd., Cleveland 10, Ohio.

R-805 Everything For Floor Care — Describes scrubbing, waxing, polishing and mopping equipment as well as waxes, sealers, and cleansers. Finnell System, Inc., Dept. TI, 1300 East St., Elkhart, Ind.

R-806 Rotary Pressure Joints—Details on self-lubricating, self-adjusting, self-aligning joints. The Johnson Corp., Three Rivers, Mich.

R-807 Servicing "One-Shot" Lubricators—Describes high capacity spring discharge piston pump lubricator. Bijur Lubricating Corp., 151 W. Passaic St., Rochelle Park, N. J.

R-808 Reduce Vibration — Illustrates savings possible through installation of Unisorb. The Felters Co., 216 South St., Boston 11, Mass.

R-810 Stop Corrosion — Details on "Speed-Rex" paint for metal, wood and concrete. Truscon Laboratories, Box 69, Milwaukee Junction, P. O. Dept. T, Detroit 11, Mich.

R-811 Cleaning Systems — Complete details on "Certified Climate and Cleaning Systems." Parks-Cramer Co., Fitchburg, Mass.

R-812 Mechanical Power Transmission — Includes drawings, dimension, weights, prices, application. Dodge Mfg. Corp., Mishawaka, Indiana.

R-814 Schaub "03" Deaerators—How a simplified principle and good engineering reduce prices. Fred H. Schaub Engineering Co., 2110 South Marshall Blvd., Chicago 23, Ill.

R-816 Leather Belting — Selection, installation, proper maintenance. Atlanta Belting Co., 508-510 Whitehall St., S. W., Atlanta, Ga.

R-817 One-Shot Lubricators—Details on pull-type semi-automatic lubricators. Bijur Lubricating Corp., 151 W. Passaic St., Rochelle Park, N. J.

R-819 Steel And Tank Service — Explains importance of periodic inspection, maintenance. Steel and Tank Service Co., 118 West 24th St., Charlotte, N. C.

R-820 Floaxial Dial Scales — Explains mechanism and gives applications. Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago 5, Ill.

R-821 Modern Methods Of Textile Floor Maintenance — Complete details on taking care of mill floors. G. H. Tennant Co., 2530 N. Second St., Minneapolis 11, Minn.

R-822 Industrial Greases — Describes multi-purpose lithium soap industrial greases. Sinclair Refining Co., 600 Fifth Ave., New York, New York.

R-823 Roller Bearings For Textiles —How roller bearings are employed for more profitable textile production. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

R-824 Cylinders And Boosters — Complete listing of "in stock" equipment including proce and description. Miller Fluid Power Co., 2040 N. Hawthorne, Melrose Park, Ill.

R-826 Maintenance Of Variable Speed Drivers — Illustrates simple program for keeping drives in top shape. Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17, Ohio.

R-827 Textile Mill Motor Control — Describes combination starters for textile machines. Cutler-Hammer, 315 N. 12th St., Milwaukee, Wis.

R-828 Blower And Exhausters — Full description, including detailed drawings. Buffalo Forge Co., 490 Broadway, Buffalo 5, N. Y.

R-829 Paint Stripping Booklet — Explains simplified method of stripping paint. Oakite Products, Inc., 22 Thames St., New York 6, New York.

R-830 Air Filtration — Illustrates Auto-Airmat, a dry-type air filter. American Air Filter Co., Inc., 275 Central Ave., Louisville 8, Ky.

R-832 Drinking Fountains & Coolers —Description of all models, dimensions, illustrations. Halsey W. Taylor Co., Warren, Ohio.

R-833 Textile Leathers Catalog — Characteristics and advantages of "Tannate" leathers. J. E. Rhoads & Sons, 2100 W. Eleventh St., Wilmington, Del.

R-834 Catalog Of Needle Bearings — Design, application for five types of needle bearings. The Torrington Co., Torrington, Conn.

R-835 Textile Lubrication — Shows methods and means of lubricating all machinery. The Texas Co., 135 East 42nd St., New York 17, N. Y.

R-836 Metered Lubrication — Points up advantages of central lubrication systems. Bijur Lubricating Corp., Rochelle Park, N. J.

R-837 Service Procedure For Ball Bearings—Helpful manual shows how to increase life of ball bearings. New Departure Div., General Motors Corp., Bristol, Conn.

R-839 Lubrication Of Electric Motors —How to lubricate and clean ball and roller bearings. New York & New Jersey Lubricant Co., 292 Madison Ave., New York 17, New York.

(Continued Next Page)

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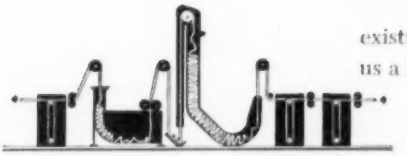

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R-840 Ball Bearings For Textile Machinery — Bearings for all phases of textile processing. The Fafnir Bearing Co., New Britain, Conn.

R-841 Lubrication Of Bearings — Helpful list of do's and don'ts to prolong bearing life. New York & New Jersey Lubricant Co., 292 Madison Ave., New York 17, New York.

R-842 Textile Mill Cleaning Guide — Methods and means of proper cleaning and maintenance. Oakite Products, 52 Rector St., New York 6, New York.

R-843 For Static Elimination — Eliminates static safely, simply and inexpensively. Simco Co., 980 Walnut St. Lansdale, Pa.

R-845 Cut Costs With Moyno Pumps — Describes "progressing cavity" pumps for mercerizing and sizing. Bulletin 30-TI, Robbins & Myers, Inc., Springfield, Ohio.

R-847 Lubricants For Textiles — Working samples of bearing lubricants, spindle oils, etc. Georgia-Carolina Oil Co., Box 101, Macon, Ga.

R-848 Oil-Tight Pushbuttons. — Describes line of pushbutton units for textiles. Cutler-Hammer, Inc., Milwaukee, Wisconsin.

R-850 New Lubricated Plug Valves—Semi-steel and steel lubricated plug line. The William Powell Co., 2525 Spring Grove Ave., Cincinnati 22, Ohio.

R-851 "Tank Talk"—Shows various types of elevated steel tanks. R. D. Cole Manufacturing Co., Newnan, Ga.

R-852 Cotton Mill Equipment — Traces pictorially the steps in processing raw cotton into finished cloth. Westinghouse Electric Corp., 511 Wood St., Pittsburgh 30, Pa.

R-853 Micro Switch Bulletin—Catalog of products includes prices, applications, etc. Micro Switch Div., Minneapolis-Honeywell Regulator Co. Freeport, Ill.

R-854 Roller Bearings For Textiles—How roller bearings can help production. Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

R-855 Unit Heater — Data on the Herman Nelson horizontal and vertical units. American Air Filter Co., Inc., 215 Central Ave., Louisville, Ky.

R-856 Stainless Steel For Textiles—Applications and advantages of stainless textile equipment. Allegheny-Ludlum Steel Corp., Dept. TI-71, Oliver Bldg., Pittsburgh 22, Pa.

R-857 Floor Scrubber — Description and specification for Scrubber Vac. Finnell Systems, Inc., 1300 East St., Elkhart, Ind.

R-861 "Vari-Pitch" Sheave Bulletin—Control by means of pitch diameter adjustment described. Allis-Chalmers Mfg. Co., Milwaukee 1, Wis.

R-863 Penetrating Wood Finish — Describes floor seals for textiles. E. I. Du Pont De Nemours & Co., Inc., Finishes Div., Wilmington, Del.

R-864 Certified Climate Air-Changer System — Describes use with direct humidification for partial or complete air conditioning. Parks-Cramer Co., Fitchburg, Mass.

R-868 Ridge Tool Prices—Capacities and weights included along with pictures. Ridge Tool Co., Elyria, Ohio.

R-869 Stainless Steel Fabrication — Information on ventilating and drying, slasher exhaust, and materials handling in stainless. Sims Metal Works, West Point, Ga.

R-871 Color Conditioning — How to put color to work for you. E. I. Du Pont De Nemours & Co., Inc., Finishes Div., Wilmington, Del.

R-872 Metal Conveyor Belts — Illustrates entire range of manufacture. Ashworth Bros., Inc., Metal Products Div., Fall River, Mass.

R-873 Rihco Humidifiers And Cooling Systems—Describes new atomizers to lessen air consumption in evaporative cooling systems. Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

R-874 Dynac Brake Motors—Electrical braking of a-c motors-roving, spinning, knitting. Westinghouse Electric Corp., Pittsburgh, Pa.

R-875 Textile Applications For "Scotch" Tape—Some good ideas on using "Scotch." Minnesota Mining & Mfg. Co., St. Paul 6, Minn.

MATERIALS HANDLING

R-901 Casters And Wheels—Casters and wheels for all applications. Darnell Corp., Ltd., 12000 Woodruff Ave., Downey, Calif.

R-902 Canvas Baskets — Complete line for textile use. W. T. Lane & Brothers, Poughkeepsie, N. Y.

R-903 Overhead Handling Equipment — Shows successful applications of monorail systems. American Monorail Co., 13106 Athens Ave., Cleveland 7, Ohio.

R-904 How To Test Corrugated Boxes—Offers comprehensive check-list for judging boxes. Hinde & Dauch, Sandusky, Ohio.

R-905 Conveyor Key Book—How to step-up production with modern conveying. Logan Co., 1115 Franklin St., Louisville, Ky.

R-906 How To Select A Lift Truck—Excellent means for price comparison between similar trucks. Hyster Co., 2902 N.E. Clackamas St., Portland 8, Oregon.

R-907 Corrugated Containers — Describes Multi-Unit and Bulk Container. Gaylord Container Corp., 111 N. 4th St., St. Louis 2, Mo.

R-909 Tramrail Engineering And Application — Data on how Tramrail Equipment can cut handling costs. Cleveland Tramrail Div., Cleveland Crane and Engineering Co., 1036 East 289th St., Wickliffe, Ohio.

R-910 How To Specify Packaging — Regulations on shipment, how to determine which package to use. Hinde & Dauch, Sandusky, Ohio.

R-911 New Lift Trucks—Shows latest trends in lift truck design. Hyster Co., 2902 N.E. Clackamas St., Portland 8, Oregon.

R-912 Materials Handling For Textiles—Shows how fibre trucks can increase efficiency, protect products. National Vulcanized Fibre Co., Wilmington 99, Del.

R-913 Continuous Power Conveyor—Complete information on Zig-Zag Conveyor. Richards-Wilcox Mfg. Co., Aurora, Ill.

R-914 Stresses On Overhead Tracks—Covers track peening, discusses stresses. Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.

R-915 Scientific Materials Handling—Describes various materials handling devices, includes pictures. Bennett Rose Co., Box 8, Roebuck, S. C.

R-916 Overhead Materials Handling—Treats twin fan ceiling cleaners and shock proof electrification as well. Louden Machinery Co., Fairfield, Iowa.

R-917 Little Packaging Library — Series of booklets covers the business of shipping in corrugated boxes. Hinde & Dauch, Sandusky, Ohio.

R-919 Improved Materials Handling—"Materials in Motion" describes use of fibre containers. National Vulcanized Fibre Co., 1056 Beech St., Wilmington, Del.

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Personal NOTES ABOUT MEN YOU KNOW

(Continued from page 57)

troller, Fulton Bag & Cotton Mills, Atlanta; **Michael G. Campagna,** William Skinner & Sons, Holyoke, Mass.; **Charles H. Clifford,** treasurer, Albany (N. Y.) Felt Co., and **Frank L. Palmer,** controller, F. C. Huyck & Sons, Rensselaer, N. Y.; **Edmund S. Chodd,** controller, Dixie Mercerizing Co., Chattanooga, Tenn., and **John T. Scarlett,** secretary-treasurer, Cosmos Imperial Mills, Ltd., Hamilton, Ont.

Recent appointments to the faculty of Lowell Technological Institute, include Dr. Melvin Mark, professor in the department of textile engineering, and **Fritz F. Kobayashi,** assistant professor in the department of fibers and yarns. Dr. Mark has been an instructor at North Dakota State and the University of Minnesota as well as a teaching fellow and research fellow in mechanical engineering at Harvard, and has been engaged in private practice as a consulting engineer. Professor Kobayashi was formerly assistant to the director of research and development at the Malden Spinning and Dyeing Company.

At the Lantuck division of West Point Manufacturing Co., new assistant plant manager is **Grady Webb, Jr.,** who is succeeded as assistant plant manager at the Langdale mill division by **George M. Willingham,** former supervisor of twisting, slashing, and spooling at Langdale.

OBITUARIES

Ralph C. Anderson, 60, retired director of the former Carolina Process Co., Charlotte, N. C.

Joseph L. Bridger, president and director of Bladenboro (N. C.) Cotton Mills.

Albert Friedmann, 65, retired president of Karl Lieberknecht, Inc., Reading, Pa.

Hugh Given, 64, former president and board chairman of Summerville (Ga.) Manufacturing Co.

Cornelius S. Grove, Sr., 80, retired president of G. & H. Hosiery Co. and Eureka Knitwear Mills, Inc.

William H. Hodgman, a former vice-president of the A. D. Ellis Mills, Inc., Ayer, Mass.

Flavius D. Hornaday, Sr., president of Fidelity Hosiery Mills, Inc., Burlington, N. C.

Joseph G. Lampl, president of Lampl Fashions, Inc., Cleveland, Ohio.

David E. Linn, 50, manager of sales service for Corn Products Sales Co., Edgewater, N. J.

Robert P. Masland, 59, first vice-president and chairman of the finance committee of C. H. Masland & Sons, Carlisle, Pa.

Henry M. McKelvie, 56, retired superintendent of Valdese (N. C.) Manufacturing Co.

Charles P. Matthewes, 90, former cotton buyer for Pacolet (S. C.) Manufacturing Co., and Enoree (S. C.) Manufacturing Co., now Riverdale Mills.

George P. Metcalf, 67, former president of Wanskuck Co., Providence, R. I.

William L. Mintz, 69, executive vice-president of Central Knitwear, Inc.

Henry G. Smith, 71, retired vice-president and secretary of Callaway Mills Co., LaGrange, Ga.

Kurt Thuemmler, 51, general manager of Pilgrim Full Fashion Mills, Inc., Valdese, N. C.

Adolph C. Wiese, Sr., a founder of the Weehawken (N. J.) Dye Works.

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You name the yarn . . . monofilament, fine denier, low turn or high twist—synthetics or rubber, Milton gives you true-running, well balanced beams to handle unprecedented yardages and extreme pressures!

WRITE FOR FREE BULLETINS . . . No. 49-A on Light Metal Beams and No. 54-S on Steel Beams. The Milton line includes warp beams for broad, narrow fabric, velvet and carpet looms, as well as light metal raschel, tricot and section beams.

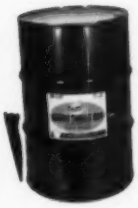
Over a Quarter Century of Dependability in Yarn Beams

MILTON MACHINE WORKS, INC.
DESIGNERS • ENGINEERS • MANUFACTURERS
MILTON • PENNA.

Colgate

SURFACE ACTIVE AGENTS

Have Many Uses In Textile Wet Processing



COLGATE

ARCTIC SYNTEX 036

A 100% Liquid Non-Ionic Surface Active Agent. For Use Where An Efficient, Economical Cleaning, Scouring, Wetting, Penetrating and Emulsifying Agent Is Needed.

Compatible with anionic, cationic and other non-ionic chemical substances, ARCTIC SYNTEX 036 is not inactivated by acids, alkalies, oxidizing or reducing agents; or by most organic ions. Stable for long periods at high temperatures. Will not form salts with metal ions. Very effective at low concentrations. Stable and effective in both hard and soft water.

CHEMICAL ANALYSIS:

	Per cent as received
Active Ingredient	99+
Moisture	0.5 max.
Ash Content	0.1 max.

STABILITY:

Hard Water	Unaffected
Metal Salts	Unaffected
Alkalies	Unaffected
Acids	Unaffected
Oxidizing & Reducing Agents	Unaffected

Recommended For Use In Textile Processes or Compounds: (1) Where emulsification and removal of oil and grease are desired or are problems. (2) In acid or alkaline solutions where other surface active agents may be inactivated. (3) In hard water or solutions of metal salts. (4) In combination with other anionic and cationic agents and other surface active or nonsurface active agents.

COLGATE

MENTOR BEADS

Heavy Gravity 60-lb. Bags

Low Density 30-lb. Bags

Spray Dried Neutral Alkyl Aryl Synthetic Detergent. Provides Excellent Wetting, Penetrating, Foaming and Dispersing Properties in Hot or Cold, Hard, Soft, Alkaline or Acid Waters.

A high-molecular-weight alkyl aryl sulphonate-type detergent, MENTOR BEADS has many uses in textile processing including: Wetting Out, Desizing, Kier Boiling, Degumming, Rayon "Boil Off," Bleaching, Fulling, Scouring, Dyeing, Washing After Dyeing, Print Washing, Finishing, Softening, Etc.

CHEMICAL ANALYSIS:

Active Ingredient		36.5%
Moisture		2.5%
Density or Apparent Gravity	Light	.20
	Average	
	Heavy	.40

STABILITY:

Hard Water	Clear up to 550 ppm hardness
Acid—Boiling .25% in Sol. of pH-1	Stable after 5 hrs.
Alkali—Boiling .25% in Sol. of pH-13	Stable after 6 hrs.
Boiling Water	Stable
Atmospheric Oxidation	Stable

NOTE

For more detailed information on either or both of these Colgate Products, write to:

Technical Service Division, Industrial Sales Department

COLGATE-PALMOLIVE COMPANY

300 Park Avenue New York 22, N. Y.

What the TEXTILE MILLS are doing

The card room of **Opp (Ala.) Cotton Mills, Inc.,** is being enlarged by some 3900 sq ft. Equipped with complete air changing facilities, the addition will be used in part to house 32 more cards.

A nonpill finish, which is a combination of equipment and chemicals, for use on nylon and Dacron lingerie and sleepwear fabrics has been announced by **Plymouth Dyeing Co.,** Paterson, N. J.

Employees in the knitting department of **Shelley Knitting Mills, Inc.,** Philadelphia, Pa., are being supplied work uniforms by the company.

A wholly-owned Canadian Subsidiary, Templon Spinning Mills, (Canada) Ltd., has been formed by **Templon Spinning Mills, Inc.,** of Mooresville, N. C. The plant (recently completed) is located in Drummondville, Quebec, and is devoted to the manufacture of knitting and weaving yarns of synthetics, and to novelty twisted yarns of various fibers for use in both knitting and weaving. Supervisory personnel for the new plant were trained in Mooresville.

The Washington, N. C., plant of **National Spinning Co., Inc.,** is being expanded to approximately 90,000 sq ft.

Tifton Rug Mills, Inc., has completed a new dye house in East Point, Ga. The firm originated in Tifton, Ga., but of recent years has moved the bulk of its manufacturing operations, and its headquarters, to East Point. It is now chartered a corporation in Fulton County. The company makes tufted rugs and carpets ranging from 2' x 3' to 12' x 15' in both cottons and synthetics.

At Hogansville, Ga., the Reid mill of **U. S. Rubber Co.** has completed the installation of new looms "to weave newer type fabrics competitively." Supplementary equipment includes an automatic winder and beaming facilities.

Recently at the Easley, S. C., ball park more than 1600 persons gathered to celebrate the completion of 1,000,000 man-hours without a lost-time accident at the Easley plant of **Woodside Mills.** Those present included employees, retired employees, and guests from the city of Easley. The menu: barbecue.

West Point (Ga.) Mfg. Co. has received a Reserve Award from the U. S. Department of Defense for "outstanding cooperation to reservists and reserve activities achieved through the personnel policies you have established." The letter from Secretary of Defense to J. L. Lanier, president of West Point Mfg., further stated: "You have thus encouraged and assisted your reservists in fulfilling their military obligations. . . " West Point employees are members of two U.S.A. Reserve units, both with head-

Our service is tailored to provide all the working capital any qualified client needs, without increased borrowing, diluting profits or interfering with management.

Information available for any manufacturer or distributor with $500,000 or more annual sales.

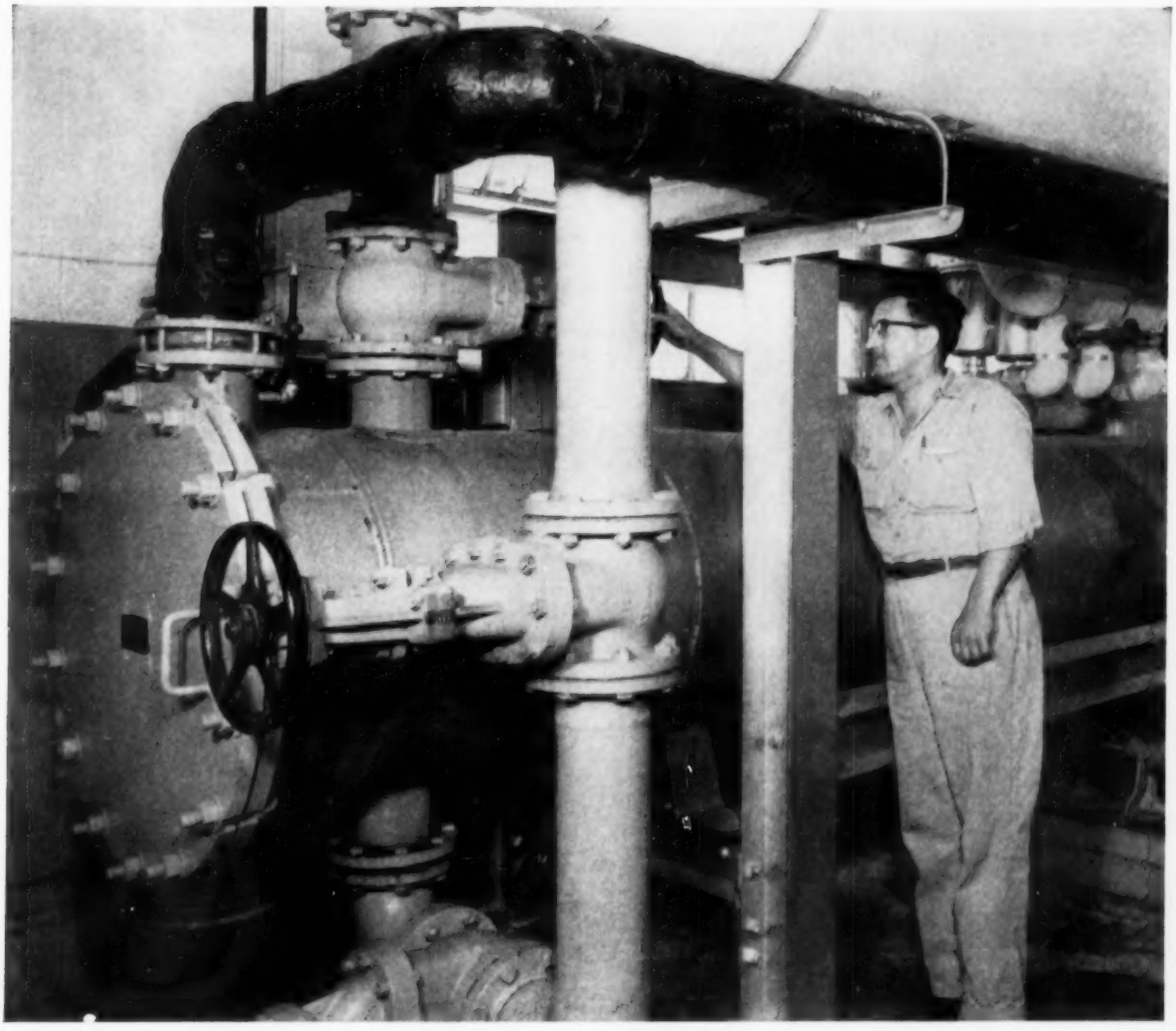
Textile Banking Company

55 Madison Avenue, New York 10, N.Y.

Providing operational financing for the apparel, electronics, furniture, leather, plastics and textile industries.

Subsidiaries:

T. B. C. Associates, Inc., New York — Southwest Texbanc, Inc., St. Louis



p-k equipment saves Magee Carpet Co. cost of a new boiler

A completely new hot water system by P-K has given the Magee Carpet Co. of Bloomsburg, Pa., such reduced steam requirements that a contemplated additional boiler became unnecessary.

P-K equipment installed comprised a 50,000 gallon storage tank supplied by heat from (1) waste heat in spent dye liquor and (2) waste heat from exhaust steam, through a reclaimer and an instantaneous water heater.

This system provided ten times the capacity of the former equipment and supplies 70,000 gal. of hot water per day with ample margin for expansion. Steam consumption has been materially decreased. The ultimate capacity is 800 gallons per minute of water 180 F or over.

If you have a heat transfer problem, bring it to P-K where the product is tailored to your needs – individually engineered to your requirements. For further information write to Patterson-Kelley Co., Inc. 210 Wilson St., East Stroudsburg, Pa.

0857

Patterson Kelley

Textile and Laundry Division

Waste Water Heat Reclaimers • Storage Water Heaters • Condensate Coolers
Instantaneous Heaters • Steam-Mizers • Feed Water Heaters

What the TEXTILE MILLS are doing

quarters in Lanett, Ala. * * * West Point is supplying free of charge, Asiatic flu vaccine for its 8000-odd employees. * * * Twelve new $2000 scholarships are being offered to high school graduates under West Point's training program which supports students for a total of 12 quarters of class work at Alabama Polytechnic Institute and on-the-job experience in one of West Point's factories. The time is equally divided between mill and class room by alternating the quarters. Students while in the plant phase of the program are paid regular wages, and attend Auburn with all expenses paid.

The real estate and plant formerly occupied by the Southern Mercerizing Co., Tryon, N. C., have been purchased by a new firm, **Carolina Yarn Processors, Inc.,** which will engage in dyeing, bleaching, glazing, and winding of all natural and synthetic yarns. The plant comprises some 48,000 sq ft of floor space, and is located on a 15-acre tract of land. Production is to begin at once.

Dan River Mills, Inc., Danville, Va., plans to construct a new research and chemical plant on a 13-acre tract just outside the city limits on Route 360. Tentative plans call for a two-level building with about 50,000 sq ft of floor space to be used in part for the manufacture of various chemicals required in the company's manufacturing and finishing operations.

Finn Lace Co. is a newly established lace mill located on Highway 3 in Coventry, R. I.

Guilford (Me.) Woolen Mills Co. recently installed six new wool spinning frames with a total of 1008 spindles.

Gsell Textile Printing Corp. has moved its holdings from an old New York loft building to a new $300,000 plant in East Newark, N. J., and changed the name to that of **Gsell Textile Printing and Finishing Corp.** The plant, at 251 Grant Ave., contains 48,000 sq ft of space on one floor. The installation of additional equipment, and the added area, will enable the firm to double its former output. Part of the new equipment will be an automatic screen printing machine which prints 54" repeats up to 54" wide in ten colors.

Stafford Worsted Co., Stafford Springs, Conn., the spinning operation of Dunn Worsted Mills, Woonsocket, R. I., has ceased operations indefinitely. General business conditions and competition of foreign imports were given as reasons for the closing.

A new plant is under construction by **P. Floro & Sons, Inc.,** adjacent to Floro Knitting Mills, about five miles from Manila, P. I. Called Floro Spinning Mills, the 10,028-spindle plant will supply yarns for Floro's knitting industry. The company has been on a continuous expansion program since 1947 when it began business as a wholesale distributor of imported textiles. It built its first knitting plant in 1954.

A large swimming pool, bath house, and recreation center has been built in Toccoa, Ga., by **Coats & Clark, Inc.,** adjacent to one of that company's plants. As part of the

NON-FLUID OIL
TRADE MARK REGISTERED

THE IMPROVED CENTRALIZED TWISTER RING LUBRICANT

White NON-FLUID OIL in grades for centralized lubrication systems is 100% lubricant, so that no residue is left to clog lines and fittings. Even when subjected to the highest pressures per square inch, white NON-FLUID OIL will not disintegrate or separate, but lubricates constantly and dependably, insuring longest life for rings and travelers.

The clean, positive lubrication provided by white NON-FLUID OIL prevents broken ends or blackened yarn—so assures top production of perfect twist at lowest cost. That's why it is preferred by most leading yarn and thread mills.

White NON-FLUID OIL is made in grades exactly suited to every type of ring and method of application. Send today for Bulletin T-16 and free sample, and give it a fair trial.

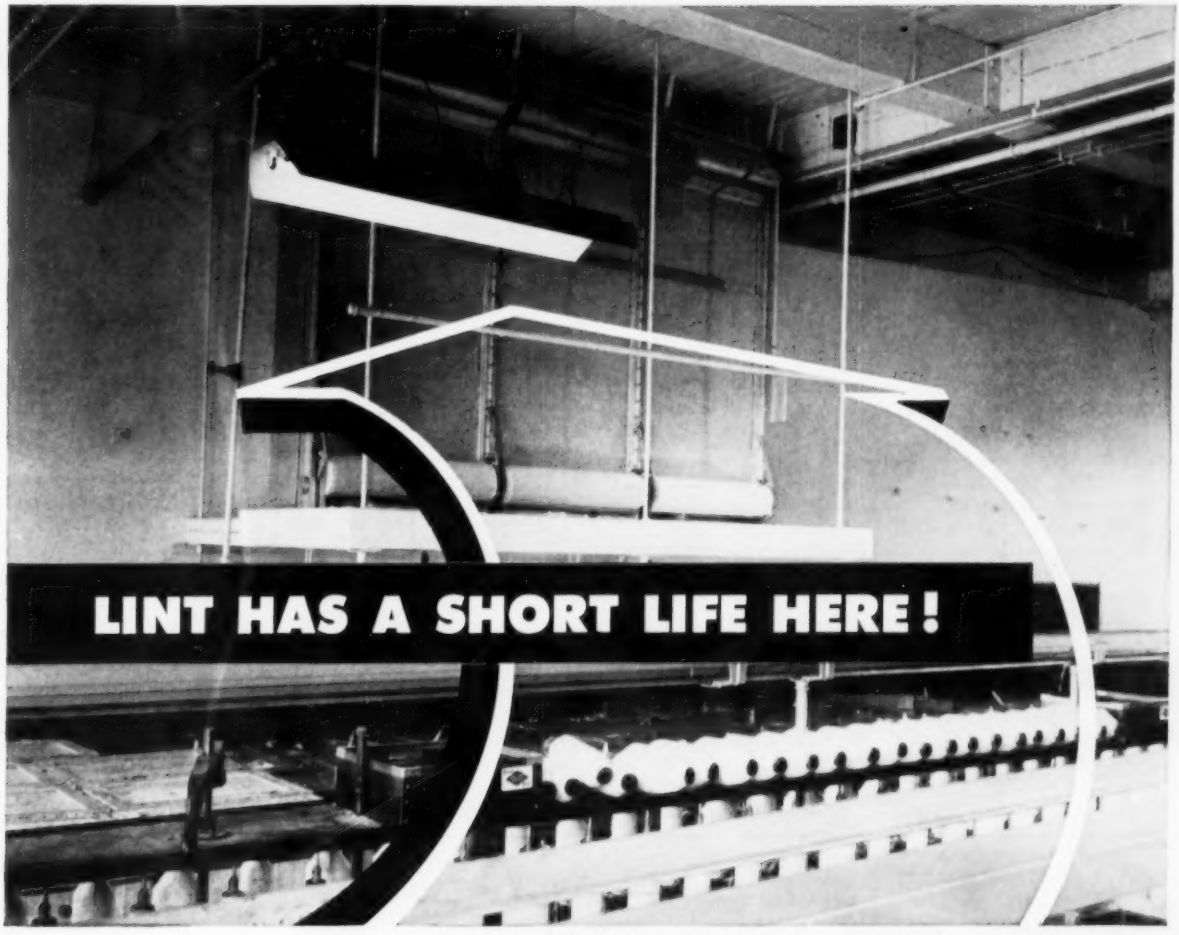
NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVE., NEW YORK 17, N. Y.
WORKS: NEWARK, N. J.
So. Dist. Mgr.: Lewis W. Thomasen, Jr. Charlotte, N. C.

1898 61 1957 NON-FLUID OIL

WAREHOUSES

Birmingham, Ala.	Greenville, S. C.	Greensboro, N. C.
Atlanta, Ga.	Chicago, Ill.	Detroit, Mich.
Columbus, Ga.	Springfield, Mass.	Providence, R. I.
Charlotte, N. C.		St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.



The spinning room at Pepperell Manufacturing Company, Lindale, Georgia.

AAF Auto-AIRMAT filters "de-lint" air in spinning room at Pepperell's Lindale Mill

The fly created during spinning operations at Pepperell Manufacturing Company, Lindale (Georgia) Division, never gets any further than the bank of Auto-AIRMAT filters mounted in the wall. Nothing but lint-free air gets beyond the Auto-AIRMATS to important yarn-processing operations in the next room.

The AAF Auto-AIRMAT is the *only* filter designed to remove fly from the air and clean itself at the same time. Airmat filtering material, winding from roll at top of unit, moves automatically down the face of the filter, collecting lint all the way—re-winds into easily disposable roll at bottom.

If you have a *lint problem*, get all the facts on the *lint filter*—the AAF Auto-AIRMAT. Call your AAF representative or write direct for Bulletin 234.

AAF Filters and Precipitators

AAF Dust Control Equipment

AAF Herman Nelson

American Air Filter
COMPANY, INC.

275 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

— BETTER AIR IS OUR BUSINESS —

Herman Nelson Unit Heaters

Illinois Heating Specialties

What the TEXTILE MILLS are doing

opening ceremonies, water safety instructions were given by a team from The Atlanta (Ga.) Athletic Club. * * * Plans have been announced to establish weaving, dyeing, and finishing operations at the Albany, Ga., plant. First production will be tape for the company's zippers.

From a recent issue of *Dixie News*, the house organ of **Dixie Mercerizing Co., Dalton (Ga.) Candlewick, Inc.,** and **Rockfish-Mebane Yarn Mills,** comes this statement: "Speakers all over the country are saying that American industry's two biggest problems are: (1) To develop a sense of oneness of business—there are no such things as separate 'management' and 'employee' interests; we are all in the same boat. (2) To develop 'customer mindedness' for, after all, the customer is really our boss. *Dixie News* has tried to make these ideas the 'theme' for this issue. . ." Reproduced here are three illustrated parts of that "theme." The chap in the lifesaver came from Page 2; the couple in the sunken canoe were lifted from Page 9; and picture

showing the steamship is a reproduction of the back cover.

An equipment replacement and expansion program, including flat bed machines for producing fancy knitted designs on infant's headwear, is scheduled to double the productive capacity of **Ekay Knitting Mills,** Milwaukee, Wis. The firm produces Heidi bonnet and bootie sets.

Cornell Mills, Inc., a new screen printing firm, has been formed in New York City by Herman C. March and James J. Betterman.

A licensing contract between Nerva, S. L., Barcelona, Spain, and **Cooper's, Inc.,** Kenosha, Wis., has been signed giving Nerva permission to produce Cooper's Jockey brand underwear in Spain. There are now 16 overseas firms producing Jockey brand underwear for foreign consumption.

In the interests of greater efficiency, **Sayles Finishing Plants, Inc.,** is moving some preliminary processing operations from its Glenlyon Print Works Division (Phillipsdale, R. I.) into its dyeing and finishing plant in Saylesville, R. I.

A yellow hunting boot sock (75% wool-25% nylon) is being produced by **Beloit Hosiery Co.,** McMinnville, Tenn., in sizes 10, 11, and 12. Featuring a 14½" leg, the sock is made with "precautionary black" ankle and calf striping.

Beaunit of Puerto Rico, Inc., has expanded its tricot knitting facilities in Humacao by 50%.

While production continues at a normal pace, **Mayfair Mills** will modernize and expand its Glenwood Mill Div. at Easley, S. C. A one-story, 30,000-sq ft, air conditioned weave room is being built to permit consolidation of all looms in a single room on the ground floor. Carding facilities will be relocated on the second floor, and together with the spinning, modernized.

Present plans call for the complete liquidation of the recently-closed **Richmond (Va.) Piece Dye Works, Inc.**

Kerr Bleaching and Finishing Works, Inc., Concord, N. C., has placed an order for sufficient monovalent flu vaccine of the Asiatic variety to take care of all employees. This will be administered at no cost, under the supervision of the Cabarrus County Health Department. Inoculations will begin as soon after delivery as possible.

New New

The Chatham Stop Counter

- Stops Weavers' Pay Confusion
- Improves Cloth Quality
- Saves Money

Weavers' Pay This device accurately counts warp and filling breaks—separately. Thus, for the first time in weaving history, you can determine an equitable basis for a day's pay.

Quality The Chatham Stop Counter "puts the finger" on causes of poor running work so that these can be corrected. Also reduces warp-out and draw-back defects.

Economy Eliminates the costly manual counting of loom stops...and also the false stops from slack filaments and terry warps. Permits fast and accurate changes in loom assignments to increase over-all efficiency. Records show that Chatham Loom Stop Counters pay for themselves in 4 to 5 months.

Write Dept. T for full information today.

Strandberg ENGINEERING LABORATORIES, INC.
416 W. MARKET ST., GREENSBORO, N. C.

Posters pass the word

Here's an easy way to improve quality, reduce seconds, train employees, and boost morale . . . use the posters which appear every month in TEXTILE INDUSTRIES.

If you aren't already taking advantage of this new reader service, turn to page 125 of this issue and look at Posters 7 and 8 of the series.

Each month posters for two different mill departments are included, and it is planned that all departments in spinning, weaving, and wet processing plants will be covered in turn.

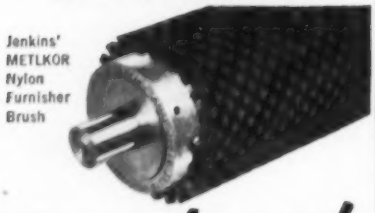
If you need additional reprints, just write us. They're free to subscribers.

NBP
BPA

Another Reader Service By **Textile Industries**

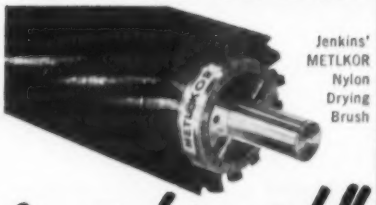
806 PEACHTREE ST., N.E., ATLANTA 8, GA.

"a brush



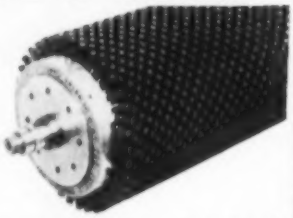
Jenkins' METLKOR Nylon Furnisher Brush

is a brush



Jenkins' METLKOR Nylon Drying Brush

is a brush"



Jenkins' METLKOR Brushing Machine Brush

Poetically speaking, true, but there's no brush like a Jenkins' METLKOR Brush. Textile Mill men everywhere say it's true. There are "Look-Alikes", "Just-as-Goods", "Steals", "Terrific Bargains" but only one Jenkins' METLKOR. They are built better to perform better to last longer. Result . . . Improved product, greater satisfaction and economy.

Specify Jenkins' METLKOR the original . . . the best *Metal* Core brush

METLKOR®
CYLINDER BRUSHES
and **LIFEWOOD®** WOOD BACKED BRUSHES

M. W. JENKINS' SONS, INC.
— Serving Industry for 80 Years —
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SUPPLIERS News

WHAT THEY ARE DOING

Among features of the new 100,000 sq ft building in Holyoke, Mass., into which the **Acme Chain Corp.** has moved, are air-conditioned offices, conference room for salesmen, directors' room, and conference room for foremen. New equipment valued at $100,000 has been installed.

Alco Oil & Chemical Corp. has elected as president Frank D. Andruss, formerly vice-president and general sales manager of General Latex & Chemical Corp.

American Cyanamid Co. has announced the establishment of a sales and merchandising organization for the marketing of Creslan, the firm's acrylic fiber. Managers of sales and merchandising to the woven goods, knit goods, and home furnishings fields respectively are: Charles D. Reich, George P. Vescio, and William G. Fash. * * * Kenneth C. Towe, formerly president, has been elected to the newly created post of chairman of the board of directors. Dr. Wilbur G. Malcolm, who was vice-president for marketing, has been named president and chief executive officer; and Kenneth H. Klipstein, vice-president, has been elected to the board of directors.

Armstrong Cork Co. has launched a program for the development of major new products and markets. To implement the program are two new staff functions—new product planning and new product coordination. New product planning is headed by Edmund Claxton, former director of research. Mr. Claxton's new title is vice-president for new product planning. F. B. Menger, associate director of research, has been named to succeed Mr. Claxton as director of research. W. N. Hartman, Jr., assistant treasurer and general credit manager, has been selected to head the second new staff function, new product coordination.

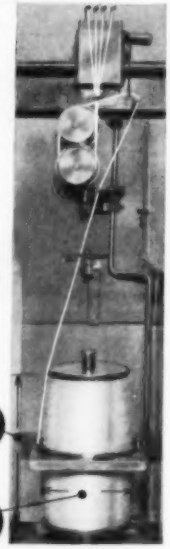
L. O. F. Glass Fibers Co. has purchased an 88-acre site two miles east of Laurens, S. C., and plans to establish, on a unit-by-unit basis, a large, fully integrated glass textile yarn plant.

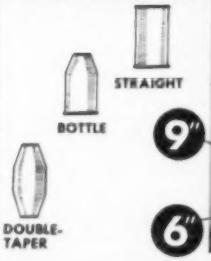
Recently named salesman in the New York area for textile products of **Owens-Corning Fiberglas Corp.** was J. G. Carden who was previously in the firm's Washington sales offices.

Richards - Wilcox Manufacturing Co. has announced the appointment of Major Gen. Marshall S. Roth, U.S.A.F. retired, to the position of assistant to the president.

Carbic Color & Chemical Co., Inc., technical representatives and distributors for Farbwerke Hoechst AG, has added to its sales staff David B. Ekstrom, Jr., and Richard M. Locke. Mr. Ekstrom, who lives in Greensboro, N. C., was formerly director of technical service and sales for O. B. May, Inc. Mr. Locke, who will serve the textile trade from Spartanburg, S. C., was with General Aniline & Film Corp.

THE NEW
5 POUND
FLETCHER
MASTER DUPLEX DOUBLER-TWISTER
THREE STYLE PACKAGES





THE FLETCHER WORKS INC.
2nd & GLENWOOD AVE.
PHILADELPHIA 40, PA.

PROPER UTILIZATION OF LABOR EQUIPMENT MATERIALS

CAN MEAN A HEALTHIER PROFIT PICTURE FOR YOUR MILL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"They have done an outstanding job for us. I consider them as the outstanding organization in this field."

*A GREAT FULLY INTEGRATED TEXTILE MILL**

*Name on request

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★ **LABOR & MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES.**

★ **A FAIR DAYS PAY AND IN RETURN, A FAIR DAYS WORK.**

AMERICAN ASSOCIATED CONSULTANTS INCORPORATED

D. S. KEOGH, President

250 Park Avenue, New York 17, N. Y.
Grant Building, Pittsburgh, Pa.
206 Edificio Pastrada, Medellin, Columbia, S. A.

Davis & Furber Machine Co. announces that in addition to its service department at North Andover, Mass., a new department has been established at Charlotte, N. C., for reconditioning of napper worker rolls, including regrinding of existing clothing or reclothing with new fillet from stock.

Two members of the dyes and chemicals division of **E. I. du Pont de Nemours & Co., Inc.,** received new appointments on September 1. Robert F. Stevens, formerly sales supervisor of the Philadelphia district, was named manager of industrial chemicals and is located in Wilmington, Del. He is succeeded by Thomas A. Martone, Jr., who was a salesman of intermediates and dyes in the New York district.

Fulton Bag & Cotton Mills announce that Nelson P. Baker has joined the staff of the New York office as commission finishing representative. Mr. Baker, who was formerly with a Hohokus, N. J., finishing plant, will continue as commission finishing agent for Fieldcrest Mills, Inc.

The "Constant Card" continuous vacuum stripper for carding machines, which is made in Spain and was formerly distributed through American Balmes Corp., is now available through **Antonio B. Caragol,** 125 Broad Street, New York 4, N. Y.

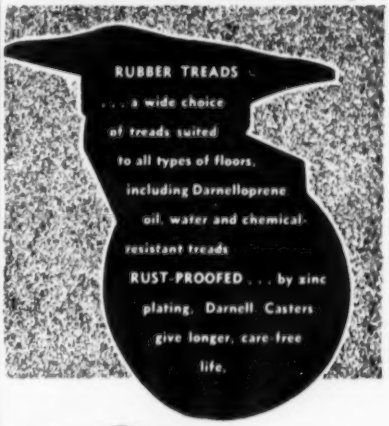
David H. Cahill has joined the technical service department of **Shawinigan Resins Corp.,** where he is responsible for work in the paper and textile fields. Mr. Cahill was formerly a group leader in the technical division of the Nashua Corp. (N. H.)

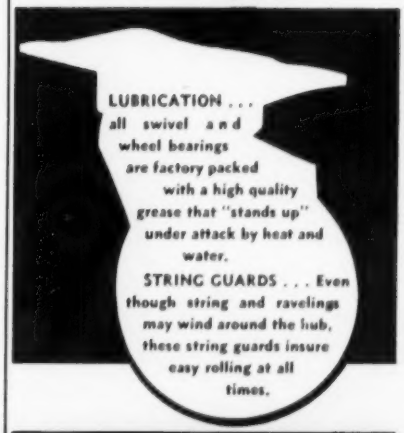
An expanded and coordinated consulting service in plastics, fibers, textile processing, and allied industries is now offered by Dr. E. W. K. Schwarz, president, and Dr. Irving Skeist, vice-president, of their consolidated laboratories to be known as **Skeist & Schwarz Laboratories, Inc.,** 89 Lincoln Park, Newark 2, N. J. Telephone MArket 3-5002.

Newly appointed director of marketing for the dyestuff & chemical division of **General Aniline & Film Corp.** is Harold G. Shelton, who has been sales manager of Antara chemicals since he first joined General Aniline in 1945. In his new position,

Where dependable SERVICE is a "MUST" ...it pays to use

DARNELL
CASTERS AND WHEELS


RUBBER TREADS . . . a wide choice of treads suited to all types of floors, including Darnelloprene oil, water and chemical-resistant treads
RUST-PROOFED . . . by zinc plating. Darnell Casters give longer, care-free life.


LUBRICATION . . . all swivel and wheel bearings are factory packed with a high quality grease that "stands up" under attack by heat and water.
STRING GUARDS . . . Even though string and ravelings may wind around the hub, these string guards insure easy rolling at all times.

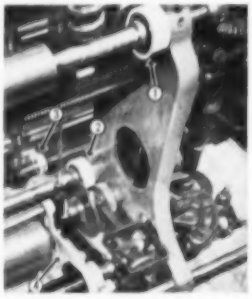
DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

Precision "Package" Bearing Units Save Money — Improve Quality

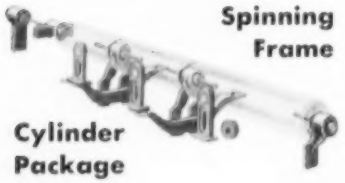
"Piece-meal" bearing changeovers may temporarily correct trouble spots, but misalignment and looseness transferred from other points cause rapid wear to new and old parts alike.

A Precision "Package" is a complete set of bearings which eliminates misalignment and strain at ALL points. It reduces downtime and replacement costs—increases speeds—and permits better quality control.

(1) Top Cone Bearings
(2) Lift Shaft Bearings
(3) Spindle Shaft Bearings
(4) Back Shaft Bearings



Spinning Frame Cylinder Package



Precision produces complete "package" units for Spinning, Roving, Carding, Lapping, and Picking Frames of all makes. Engineering service available.

Largest Stocks in America

Precision Gear & Machine Co.
2001 N. Tryon St. • ED 4-6857
Charlotte 1, North Carolina

SUPPLIERS News
WHAT THEY ARE DOING

Mr. Shelton will assume responsibility for all marketing and sales activities of the division, including that of General Dyestuff Co., the sales division for dyestuffs and related products.

An expansion designed to triple the existing semi-works facilities for the production of Darlan dinitrile fiber at the Avon Lake development center of **B. F. Goodrich Chemical Co.** has been announced. The expansion program is expected to provide additional quantities of the new textile fiber for an accelerated market evaluation program and to obtain additional design data for possible production units. Completion of the program is slated for early 1958.

Appointment of Lawrence L. Ronson as assistant sales manager of the knitted cloth division of **Industrial Rayon Corp.** has been made known. Mr. Ronson, whose offices are at the company's New York sales headquarters—500 5th Ave., has had an active part in the division's product diversification program in which new types of fabrics have been developed for the undergarment and sports fields, as well as industrial applications.

At 3355 Poplar Ave. Bldg., Memphis 11, Tenn., a new district sales office has been opened by the **International Salt Co.** under the direction of John H. Talley, district sales manager. The new office, which is responsible for a territory covering all of Ark., approximately the northern half of Miss., and the western half of Tenn., is under the company's southern sales division which has offices in New Orleans, La.

Heading the list of several management changes at the **Johnson Corp.** is the appointment of W. R. Monroe as president. Formerly executive vice-president, he succeeds R. O. Monroe who has become chairman of the board of directors. R. W. Gotschall, formerly sales manager, is now vice-president in charge of sales. T. O. Monroe is new secretary and treasurer of the Johnson Export Corp. and vice-president of Johnson-Hamstra of Weesp, Holland, manufacturer of Johnson rotating joints for European markets (except France).

Mr. Persinger

Mr. Schenck

Standard-Coosa-Thatcher

Two appointments to the sales staff of **Standard-Coosa-Thatcher Co.** have been announced. Named southeastern representative to handle thread sales for the company in South Georgia, South Alabama, Mississippi, and Louisiana, was Jack Persinger, who had formerly worked out of the Chicago office. James Schenck, who has completed a three-year tour of duty with the U. S. Navy, has joined the company's Greensboro office and will sell yarn in the Carolina and Virginia territory.

Steel & Tank Service Co. announces the location of its new general offices, warehouse, and shop at 308 Clanton Road, Charlotte, N. C.

AVOID SPINNING ROOM DISRUPTION!

There are many, many reasons and causes for machine failure presenting the costly problem of "Down-time". Some of these every day problems are unforeseen - - - BUT

the foresight of . . .
ANDERSON SHIELDS
will reduce . . .
CHIPPING — SPLITTING
BREAKING
of your . . .
SPOOLS AND BOBBINS

TEXTILE SHIELD CO., INC.
LAWRENCE MASS., U. S. A.

Mr. Pickard

Onyx Oil & Chemical Co.

M. Harm

Mr. Burdette

Stanley Works

Mr. Green

Jordan Mfg. Co.

The Onyx Oil & Chemical Co. has appointed Rodney H. Harm as sales representative for the textile division in the Piedmont region, with headquarters in Greensboro, N. C. Mr. Harm was formerly associated with Harm-Bromiley, manufacturer of pile fabrics, in mill work and designing. Louis S. Goldberg has joined the customer service department of the textile division. A Korean War veteran, Mr. Goldberg resides in Brooklyn. Clarence E. Pickard has been named sales representative for the textile division to cover South Carolina and the southern part of North Carolina, with headquarters in Charlotte, N. C. Mr. Pickard formerly was associated with Burlington Industries, dyeing & finishing division.

The National Vulcanized Fibre Co. announces the opening of a new district office to serve the textile industry in Florida. Alex Corbett, Jr. and Associates, 2411 Covina Way South, St. Petersburg, has been appointed district representative covering all of Florida South and East of the counties of Hamilton, Suwannee, Lafayette and Dixie. Alex Corbett, Jr., president of the firm, will be responsible for sales and service of Lestershire spools and bobbins and Kennett materials handling equipment, and the firm will also sell all National industrial products.

Frederick J. Gabarino, formerly director of quality control for **New Departure Division of General Motors Corp.,** has assumed a newly-created position as the division's director of sales and engineering. The appointment was announced by Seth H. Stoner, who has succeeded Paul W. Rhame as New Departure's general manager. Mr. Rhame was recently retired.

Edward L. Carlson, advertising manager of **Oakite Products, Inc.,** has been placed in over-all charge of the company's informational efforts in the industrial cleaning and metal finishing fields.

The appointment of Richard D. Burdette as sales representative for Stanley Steel Strapping, division of **The Stanley Works,** was announced recently. Mr. Burdette, who joined the firm in February of 1956, will service most of the counties in Ala., making his headquarters in Birmingham.

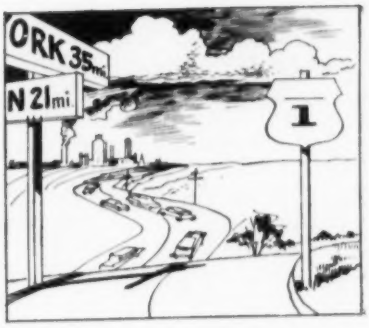
Newly named technical service representative for the textile chemical division of the **W. H. & F. Jordan, Jr., Manufacturing Co.** is Frederick E. Green who for the past five years has been associated in the same capacity with the Industrial Rayon Corp.

The 35th anniversary of the founding of **Standard Chemical Products, Inc.,** was formally observed by a week-long meeting of the sales and executive personnel at the Charlotte, N. C., plant and offices. * * * The firm has awarded a contract to the J. A. Jones Construction Co. of Charlotte for the construction of additional laboratory facilities at the Charlotte plant, approximate cost to be $100,000.

Cochrane Corp. announces the elevation of Joseph R. Denton from manager of the New York district sales office to vice-president, New York district sales.

Robert Glass has joined **Stein, Hall & Co., Inc.,** as a general sales representative at its New York branch office. Mr. Glass had formerly operated his own business and acted as an independent consultant in the adhesive and allied fields.

Stevenson (U.S.A.) Limited has been incorporated as an affiliate of Stevenson (Dyers) Limited of Ambergate, England, to assume direct licensing of the Stevensons methods of stabilizing wool for washability and matting and shrinking, heretofore sublicensed by Cluett, Peabody & Co., under their "Sanforlan" pro-



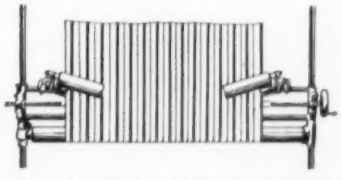
WORLD-FAMOUS GUIDER for motorists is the road marker to indicate direction of travel.

WORLD-FAMOUS, too . . . in textile manufacturing is the ever-dependable

MECHO AIR GUIDER

***Famous for* INCREASING PROFITS, BOOSTING CLOTH PRODUCTION, REDUCING HANDLING COSTS, DAMAGE and LOSS.**

The MECHO Guidor is so precision-engineered, it is accurate within one-eighth of an inch of a given mark and ranges from 1 to 400 ypm. Its hypersensitive selvage finger is guaranteed not to turn double edges. An ingenious control . . . without counterweights or linkages . . . infinitely adjusts selvage finger tension, while in operation, to suit the particular weight and weave of fabric. Stainless steel, acid- and moisture-resistant units with sealed bearings are also available.



MECHO Guiders have been standard equipment in hundreds of finishing plants for more than 20 years, handling woven and non-woven fabrics, semi-rigid plastics, artificial leather and rubber, felt and gauze. *What greater testimony to product performance can one ask?* Isn't that the kind of product you want in your plant?

PHONE, WIRE or WRITE TODAY for a MECHO complete Guiding Service catalog; it's free.

GUIDER SPECIALTY COMPANY
431 W. Rock Ave.
New Haven 15, Conn.

SUPPLIERS & News
WHAT THEY ARE DOING

gram which has been discontinued and the mark withdrawn by Cluett, Peabody. Stevensons are introducing their mark, "Dylan," to certify wool goods which are continuously tested and quality controlled to specifications for washability. Goods heretofore bearing the "Sanforlan" mark are eligible for the "Dylan" mark as a successor. A promotion and education program is being undertaken for "Dylan." Stevensons are opening a laboratory under Frank Murphy's direction for the continuous testing of articles for licensees under the "Dylan" mark as well as research and testing work for licensees of the Stevensons processes.

The appointment of Herbert G. Porter as new sales manager of **Ultra-Violet Products, Inc.,** has been announced. Mr. Porter was formerly with Equitable Leasing Co. as regional account sales manager.

Recently issued to **Universal Winding Co.,** under an assignment from the inventors, Warren A. Seem and Nicholas J. Stoddard, were three patents (Nos. 2,803,105; 2,803,108; and 2,803,109) relating to the process and the apparatus for manufacturing stretch yarn by the continuous or false-twist method.

Mr. Ross
Gaylord

Mr. Froneberger
Bullard-Clark

Mr. Ward
Ciba Co.

Mr. Richbourg
Keever Starch

Lee J. Ross has been appointed regional sales manager of the southeastern division, **Gaylord Container Corp.,** division of Crown Zellerbach Corp., headquarters of which is in Atlanta. Mr. Ross had been assistant regional sales manager for the southeastern division, and his new appointment was made in view of the approaching retirement of Horace W. Beck on December 31, 1957, who will shortly complete 30 years of service with the firm.

At the **Bullard Clark Co.,** Edward J. Bullard has been elected chairman of the board of directors. He is succeeded in his former position as president and treasurer by Jack D. Lodge, formerly vice-president and secretary of the firm, which manufactures textile weaving loom parts, cotton buffing wheels and rubber items. In addition to continuing as sales manager for the company's textile divisions, Vice-President William R Muller was named division manager of E. H. Jacobs northern division.

* * * L. L. Froneberger, Jr., with the firm for 20 years, has been appointed a district sales manager in the South for the E. H. Jacobs northern and southern divisions. Mr. Froneberger's home is in Greensboro, N. C.

Ciba Co., Inc., has appointed E. Pierce Ward as technical service manager for the southern district office in Charlotte, N. C.

Thomas S. Richbourg has joined the sales and service staff of the textile division of **The Keever Starch Co.,** and is located in Greenville, S. C. Mr. Richbourg was formerly associated with Wennonah Cotton Mills, Lexington, N. C., and the weaving division of The Springs Cotton Mills, Lancaster, S. C.

Republic Steel Corp. has appointed Fred E. Schroder, R. P. E., 3 West Plaza, Greenville, S. C., to handle the sale and distribution of Republic materials handling equipment.

INDUSTRIAL ENGINEERS
Specializing in Textiles since 1914

MODERNIZATION PROGRAMS
PLANT LAYOUTS
MANAGEMENT PROBLEMS
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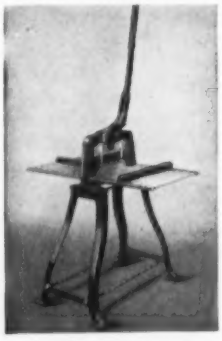

Sample-Cutting Pinking Machines
All Sizes — hand and power

New Electric Hole Drilling Machine For Sample Swatch Books

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CHANDLER MACHINE CO.
234 West St. Ayer, Mass.

STATIC

can be eliminated . . . safely, inexpensively. SIMCO makes a complete line of "Midget" static eliminators, including high efficiency static bars for warpers and creels, and special easy-to-clean bars for cards and garnetts. *All are guaranteed* to be effective! Write for facts.

the SIMCO company
920 Walnut St., Lansdale, Pa.

Ground has been broken for a new $5 million bearing plant in Indianapolis, Ind., for **Link-Belt Co.** Construction of the new plant, which is estimated to increase by 50 per cent the capacity of the company's present Dodge bearing plant, is expected to be completed in 1958.

The Mead Corp. announces that the names of their wholly owned subsidiaries, Atlanta Paper Co. and The Jackson Box Co., have been changed to **Mead-Atlanta Paper Co.** and **Mead Containers, Inc.,** respectively. There will be no change in the managements of the plants or in their sales organizations.

Mimosa Corp., a new Belton, S. C., enterprise formed by a group of midwestern business leaders, has acquired from Hoosier Cardinal Corp., its Cardinal division. The Mimosa Corp. will continue to concentrate upon advancing current processes as well as upon diversification into the textile field where Cardinal pioneered numerous injection-molded, glass-reinforced quills, bobbins, spools, pirns, etc.

Minneapolis-Honeywell Regulator Co. has leased a new $300,000 plant in Fall River, Mass., for production of a new line of electronic industrial controls. The 37,400 sq ft, one-story plant is to be a manufacturing unit of the industrial division, and it is expected that personnel will ultimately total 200.

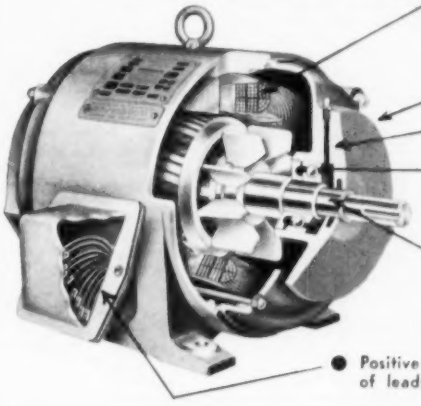
Mitchell-Bissell Co. has announced the election of William F. Fuetterer and James B. Hassall as directors of the company. Mr. Fuetterer has also been named secretary of the company, and Mr. Hassall assistant secretary.

Paisley Products, Inc., adhesive producing subsidiary of Morningstar Nicol, Inc., has announced the acquisition of Los Angeles Paste Co., formerly operated by La Mont, Inc., at 650 Clover St., Los Angeles, Calif.

National Adhesives, division of National Starch Products, Inc., announces the consolidation of the development and technical service departments. Ralph McGaffin is manager of the new technical development division which is based at the Plainfield, N. J., laboratories. Within the same division, William Sederlund has been appointed manager, packaging adhesives, technical development. Sam Gold has been named

STAMINA of BROOK A.C. MOTORS is no coincidence!

Design is based on over half a century of experience. Built to surpass NEMA Specifications, yet cost no more than ordinary motors. Single and polyphase. All major types. 1 to 600 HP. Shipped from stock.


Long-life windings are triple impregnated and baked.
Internally-ribbed, shock resistant iron frame.
Generous bearing lubrication capacity.
Bearings two sizes larger than customary; yet, still replaceable from any standard bearing stock.
High tensile steel, precision ground shaft and balanced rotor assembly.
Positive identification of leads.

world's most respected motor

BROOK MOTOR CORPORATION

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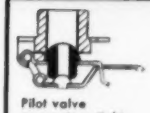
SINCE 1904 BROOK MOTOR CORPORATION

Factory Representative, Warehouses, Dealers, Service Stations, in Major Cities.

Why the uni/RAP is Universal



The Dual-Valve

Automatic Pressure Range 0 to 250 lbs.

- Tremendous Capacity • Fast Warmup • Less Wire Drawing
- Reduces water hammer • Reduces trap and parts inventory
- Completely universal without changes or adjustments
- Pipe Sizes ½" through 2". Write for Bulletin 800T.

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Rates are net, payable in advance each month. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches.
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POSITION WANTED: 20c per word per insertion; minimum charge $4.00 Cash with order. Box Number address care of TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga., count as eight words. Advertisements for help wanted, equipment for sale, for rent or wanted, and professional cards are accepted at display rates only.

FOR SALE

41—40" Saco Lowell Cards, 12" coilers, 27" doffers, 100/110 wire, Abbington Stripper motions.
1—Complete Abbington Stripping System for 55 cards, has 5 stage 550 volt 40 HP motor and pump, piping and tank.
2—10x5 Whitin-Woonsocket 1952 model G10C Slubbers with Interdraft, 7½" gauge, 120 spindles each, Bijur lubrication system, single carriage.
1—10x5 Whitin-Woonsocket 1951 model G10C Slubber with Whitin Interdraft, 120 spindles, 7½" gauge, single carriage.
1—10x5 Whitin 1939 model G10 Slubber with Interdraft, 120 spindles, 7½" gauge, single carriage.
3—No. 102 Foster 120 spindle Winders, set up for 3-30 paper cones, double motor driven.

ABOVE EQUIPMENT IN EXCELLENT CONDITION

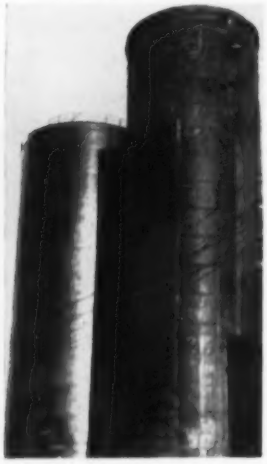
SOUTHERN MILL SUPPLY COMPANY
BOX 83 Phone LI-66553
ATHENS, GA.

FOR SALE:

55T, 81T, 120T Stainless Steel
Package Dyeing Machines

CALEDONIAN DYE WORKS
Emerald and Westmoreland St.
Phila., Pa. RE 9-2322

FOR SALE
1,500,000 GALLON
WATER STORAGE



1—1,000,000 gallon app. 45' dia x 100' high, welded, like new.

1—500,000 gallon app. 25' dia x 100' high, riveted, old, but in usable condition.

Bids will be considered on

1. As is, where is basis.
2. Dismantled, match marked & loaded on freight cars.

Write Box 767, Main Post Office
E. Market St., Akron 9, O.

DYERS or FINISHERS

The Chemstrand Corporation, a major multi-plant, international synthetic fiber producer, which has doubled in size since 1956, requires both dyers and finishers for its Technical Sales Service Department to demonstrate dyeing and finishing procedures.

Experience with Acrylic helpful but not essential. Specialized training program offered.

DYERS—Should have experience in dyeing of stock, yarn, tow, sweaters, knitted and woven fabrics of both natural and synthetic fibers.

FINISHERS—Should be well acquainted with all types of finishing machinery and their operations—and with modern finishing materials and their applications.

Send resume of qualifications and experience to
Technical Personnel Manager

THE CHEMSTRAND CORPORATION
Box TS-1
Decatur, Alabama

WANTED: NYLON YARN

Raw and thrown, all sizes and types. Advise description and quantity. Also, rayon and cotton yarns.

RICHMOND CONVERTING COMPANY
P. O. BOX 111 — PAWTUCKET, R. I.

ELASTIC YARN

We Stock for Continuous Supply—All sizes and constructions
Also Cotton—Rayon—Nylon Yarns
RICHMOND CONVERTING COMPANY
N. Y. OFFICE: 1261 Broadway, ORegon 9-2780
MILL & WAREHOUSE: Pawtucket, R. I., PAwtucket 5-2240

PENNSYLVANIA REPRESENTATIVE WANTED

Prominent supplier has opening in Pennsylvania territory for textile school graduate under 30. Must have mill experience. Good salary, expenses, other benefits. Reply to Box 11, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 8, Georgia.

SALES ORGANIZATION IN THE AUTOMOTIVE FIELD DESIRES TO REPRESENT A CARPET ACCOUNT CAPABLE OF HANDLING AUTOMOTIVE QUANTITIES. PRESENT SALES VOLUME TO O.E.M. ACCOUNTS IS IN EXCESS OF SEVENTY MILLION DOLLARS PER YEAR. Reply to Box 13, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 8, Georgia.

WANTED

Due to expansion of our wet processing department we have openings for a young textile chemist with a few years practical experience. Also for experienced practical man as foreman in small wool scouring plant. Wonderful opportunity in old established southern mill manufacturing natural and synthetic yarns. Reply to Box 16, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 8, Georgia.

Check Tensions
in Yarns, Cords, Rubber
Quick Trigger Action
SAXL TENSION METER
Tensitron, Inc., Harvard, Mass.

BOBBINS—BOBBINS—BOBBINS

Our specialty is good used automatic loom bobbins. We also deal in twister and roving bobbins. Send us samples of what you need or what surplus bobbins you have.

CHARLES G. STOVER COMPANY
West Point, Georgia

SUPPLIERS News
WHAT THEY ARE DOING

manager, technical market development, with headquarters at Plainfield.

H. B. ("Booch") Askew is now representing the **National Ring Traveler Co.** and Sterling Division in Georgia and Alabama, in addition to the other companies he has been representing in this territory. Mr. Askew's office is in his Griffin, Ga., home.

In a major expansion of sales personnel and technical services recently announced by the **Warwick Chemical Division of Sun Chemical Corp.** A. J. Picciotti was promoted from technical service representative to the newly created position of general sales manager. Liaison between Warwick's sales and technical departments in New York and New Jersey will be supervised by Louis A. Edelman who has been appointed technical service manager for the area. Mr. Edelman has been associated with both the textile and paper trades in his recent position as a sales service technician for F. C. Huyck & Sons. David Koenig will take over as the new manager of the textile application laboratory in Rhode Island. Before joining Warwick, Mr. Koenig was engaged in application and development research at United Merchants & Manufacturers, Inc.

Textile Machine Works announces that the company has acquired a license under the Hemphill argyle machine patents. The Reading CK-A is now being delivered as a four-feed machine. * * * Darell Rank has been assigned to the controller's department where he will devote all of his time to methods analyses. The technical publications department, under Floyd K. Foglemen, will assume the advertising duties being relinquished by Mr. Rank, and press matters will be handled by J. L. Kline, personnel director.

Robert O. Derrick has joined the **Tennessee Corp.** as a development specialist in the market research and development department which has been transferred to new quarters at 1330 West Peachtree St., N.W., in Atlanta, Ga. Mr. Derrick was formerly purchasing agent for chemicals of the Springs Cotton Mills.

Turbo Machine Co. has announced the signing of an agreement with E. H. Brewin and G. H. Brewin, covering the manufacture, sales, and service of an all-purpose hosiery machine in which preboarding, scouring, dyeing, finishing, and final boarding are accomplished simultaneously. The machine, formerly built by Turbo for Dyotherm Corp., will be called the Brewin machine for the inventors, Grant H. Brewin and his father, E. H. Brewin. Grant H. Brewin has joined the Turbo organization.

Newly appointed exclusive distributor in Ga., Fla., eastern Tenn., and portions of Ala. for the **Dorr-Oliver, Inc.,** chemical processing and industrial pumps is **Rittelmeyer and Co.** of Atlanta, Ga., with headquarters at 150 Nassau St., N. W.

Richard D. Riedell has been appointed regional representative of textile sales for **Reynolds Metals Co.,** with headquarters in New York. Mr. Riedell was formerly associated with The Dobeckmun Co.

Original Bradford Soap Works, Inc., announces the appointment of Mohawk Chemicals, Ltd., P. O. Box 61, Mt. Royal Station, Montreal 16, P. Q., Canada, as distributors for its textile auxiliaries, including polyethylene-type finishing compounds, Bradsyn detergent solvents, and other special chemical products, as well as its technical service. Mohawk Chemicals Ltd. will provide regular coverage of the area.

Two **Whitin Machine Works** executives have been advanced to newly created positions: Vice-president E. Kent Swift, Jr., was elected first vice-president, and vice-president John H. Bolton, Jr., was also named director of sales for the company.

Wildman Jacquard Co. has announced the appointment of Decatur Cunningham to the position of southern sales director for Hemphill "Banner" line of automatic knitting machinery. Mr. Cunningham, who joined the sales staff in 1955, succeeds T. T. Toole, Jr., who has resigned.

DINKLER SETS NEW STANDARDS IN HOSPITALITY

These famous Dinkler Hotels and Dinkler Motor Inns combine the wonderful old traditions of friendliness and hospitality with efficient, modern management and up-to-the-minute facilities. All Dinkler properties are 100% air-conditioned, with newly redecorated guest rooms, beautiful new restaurants and spacious new convention and meeting facilities. Equipment and service are streamlined, but the friendly, attentive interest in the individual guest remains the pillar of Dinkler hospitality.

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DINKLER-TUTWILER, *Birmingham*
DINKLER-JEFFERSON DAVIS, *Montgomery*
DINKLER-ANDREW JACKSON, *Nashville*
THE ST. CHARLES, *New Orleans*

DINKLER HOTELS
CARLING DINKLER, *President*
CARLING DINKLER, JR., *Exec. V. P. and Gen. Mgr.*

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JAMAICAN MOTOR LODGE
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Teletype Service to all Dinkler Hotels
Headquarters, Dinkler Plaza, Atlanta

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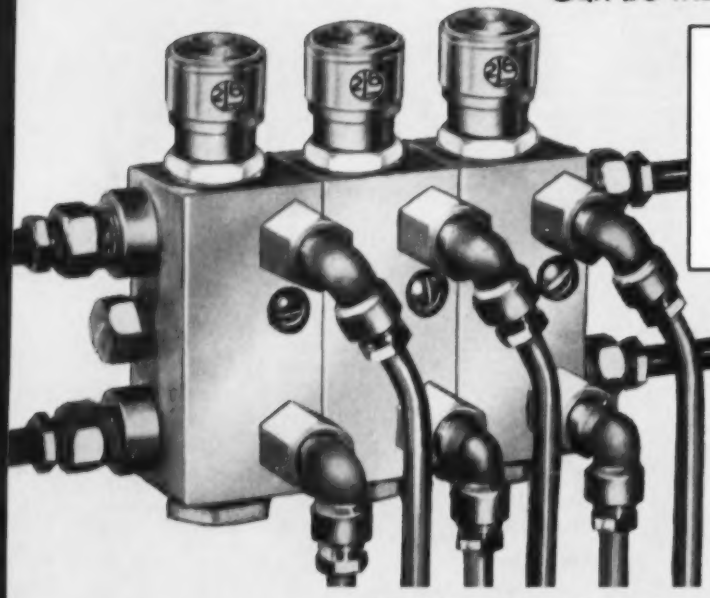

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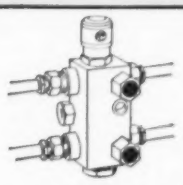

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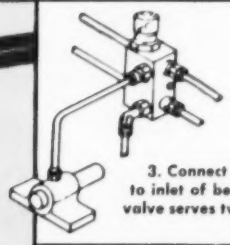

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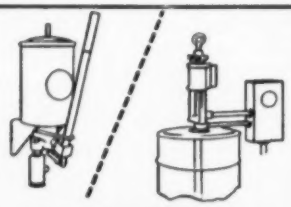

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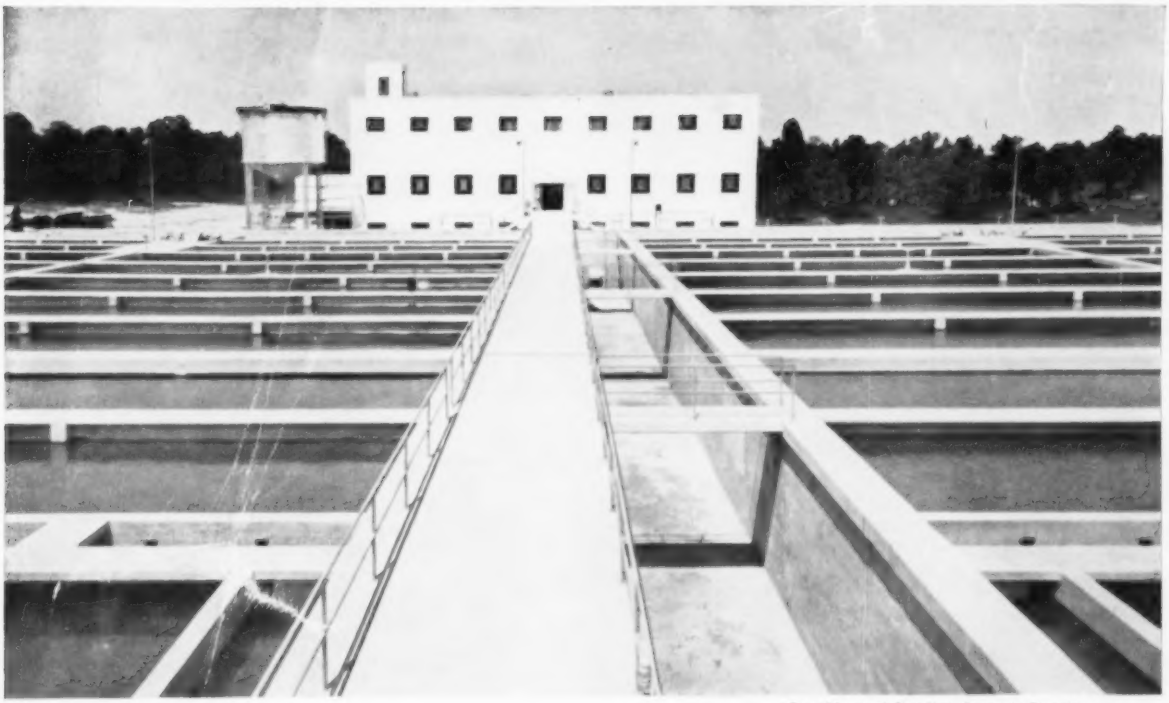

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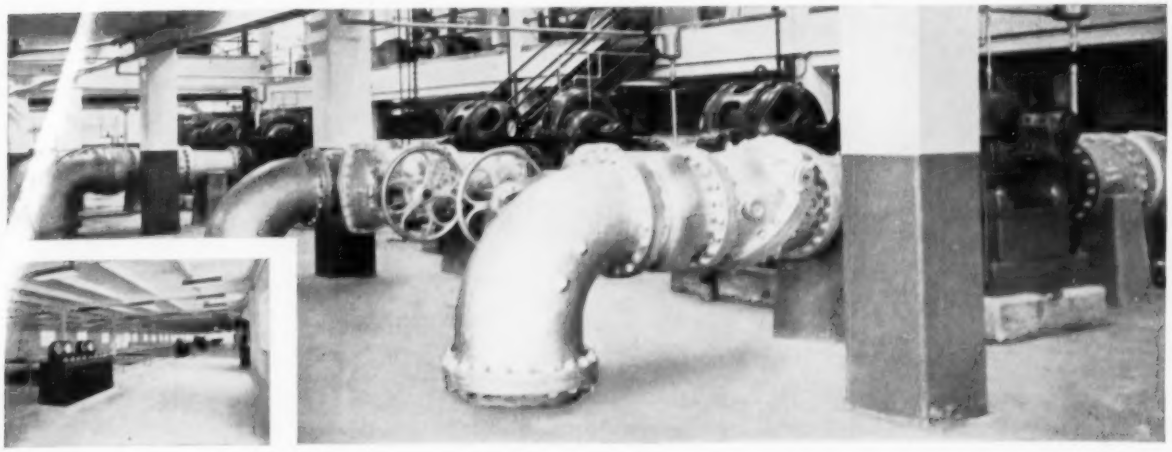

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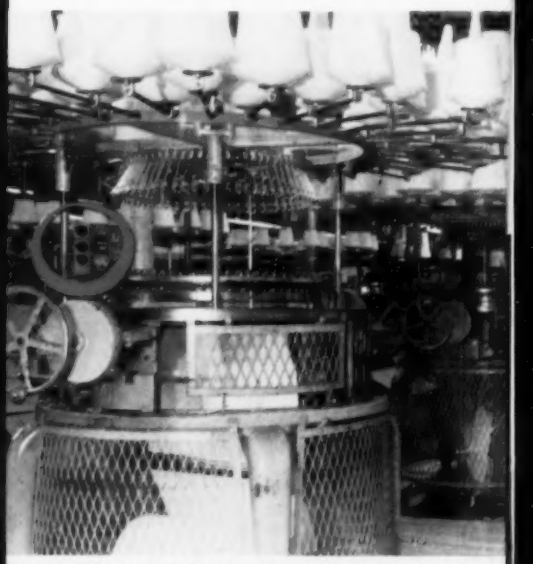

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